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# A solution for breaking the impasse of burnout measurement

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## Beyond the Glass Ceiling—Do Women in Senior Positions Face a Precarious Glass Cliff?

**To the Editor** We have read with great interest the recent commentary in *JAMA Surgery* on challenges to professional advancement facing women surgeons.[1] This follows a long series of articles and letters in recent months highlighting issues occurring earlier in female surgical careers, including gender stereotyping affecting surgical trainees and the gender gap that exists in surgical residencies.

As senior female academics, we welcome extension of the discourse to consideration of the challenges faced by women in more senior leadership roles, but we ask that the dialogue be extended to what happens next in female careers. In the business world, it has long been recognized that women climbing the corporate ladder often confront a glass ceiling. However, once women break through and achieve leadership roles, there are also reports that they are more likely than men to find themselves on a glass cliff, such that their leadership positions are risky or precarious.[2]

So far, this phenomenon has not been examined in medicine, to our knowledge. We have recently explored this in the male-dominated specialty of transplantation. We undertook an international survey to explore conscious and unconscious bias in the perception of adverse clinical incidents in clinical scenarios where the senior member of staff is randomly allocated a male or female name.[3] Interestingly, while overt gender bias was not evident when rating performance, respondents did display bias in their use of language. For example, where a clinical judgment proved incorrect, male individuals were described as being forceful but female individuals as needing support. In cases where something went wrong, the comment for female individuals was more likely to be that they should not have decided to proceed. These comments demonstrate deeply engendered leadership beliefs. Coronavirus disease 2019 has begun to expose similar systemic assumptions that may cause unintentional disadvantage for female physicians because they are being held to different standards and judged by different metrics than their male peers.[4] Our research indicates that the glass cliff effect can present a serious risk for senior women in medicine today, particularly in terms of how decisions made under conditions of uncertainty are perceived. In the business world, academics also report a phenomenon termed the *savior effect*, which manifests as senior women and other minoritized CEOs being replaced by a white male leader when performance declines.[5] After coronavirus disease 2019, it will be interesting to see how the female national leadership role in countries such as Germany and New Zealand is viewed compared with their male counterparts elsewhere.

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## The Occupational Depression Inventory—A Solution for Breaking the Impasse of Burnout Measurement

**To the Editor** In their recent study, Hewitt et al[1] found that the prevalence of burnout varied dramatically (from 3.2% to 91.4%) depending on how the syndrome was defined. The authors' observations resonate with long-lamented problems in the conceptualization and measurement of burnout.[2,3] Even the most basic aspects of the definition of burnout have remained disputed despite nearly 50 years of research on the syndrome. Researchers have failed to establish firm diagnostic criteria for burnout, leaving unresolved the key question of what constitutes a case. This situation has been a hindrance to occupational health decision makers, who need to base their actions on clear, clinically founded information. Considerable resources have been dedicated to burnout research for a return on investment that is difficult to identify in terms of health promotion.

In view of the profound problems affecting burnout's conceptualization and measurement and because there is now robust evidence that burnout is a depressive condition,[4] we recommend that occupational health specialists shift their focus from burnout to depression. A measure of job-related depressive symptoms, the Occupational Depression Inventory (ODI), has recently been developed.[5] Advantageously, the ODI resolves many of the persistent problems linked to burnout while being consistent with burnout researchers' original aim of assessing a work-attributed form of distress. The ODI includes a diagnostic algorithm that allows investigators to estimate the prevalence of depressive disorders that individuals specifically ascribe to their job. Importantly, by assessing symptoms such as suicidal ideation, the ODI enables researchers

and practitioners to identify individuals in urgent need of medical attention. The evidence available indicates that the ODI has excellent psychometric and structural properties, which is not the case for the Maslach Burnout Inventory, the most widely used measure of burnout.[4]

Occupational health specialists have persistently come up against the problem of how to define and diagnose burnout, as illustrated again by the findings by Hewitt et al.[1] Somewhat surrealistically, studies claiming to estimate the prevalence of burnout have multiplied despite the absence of a diagnosis. By repatriating the topic of job-related distress in the well-established framework of depression, we have a chance to assess and promote the health of our workforce more effectively.

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## Association of Sarcopenia and Body Composition With Postoperative 90-Day Morbidity After Liver Resection for Malignant Tumors

**To the Editor** We read with great interest the article by Berardi and colleagues.[1] To investigate the association of sarcopenia and body composition with short-term outcomes after liver resection for malignant tumors, a total of 234 patients were enrolled into this prospective cohort study. According to the assessment of muscle mass and strength using the skeletal muscle index and the handgrip strength test, all patients were divided into 4 groups: group A (normal muscle mass and strength; n = 78), group B (reduced muscle strength; n = 13), group C (reduced muscle mass; n = 75), and group D (reduced muscle mass and strength; n = 68). Multivariate logistic regression demonstrated that compared with group A, group D was independently associated with postoperative 90-day morbidity after liver resection. Although innovative and inspiring, several points warrant further clarification.

First, in the protocol of this prospective study, the authors mentioned that the minimal sample size required to achieve statistical significance was 224, which was calculated between 2 groups, the sarcopenia and nonsarcopenia groups, by a 2-sided α of .05 and β of .10. Nevertheless, all 234 enrolled patients in this study were assigned to and analyzed by 4 groups (groups A through D) but not 2 groups, which was inconsistent with their proposed protocol for estimating the sample size. Theoretically, a larger sample size is estimated to be needed if using the 4-group estimation method.

Second, as shown in the eTable,[1] the authors put those variables with $P < .05$ in the univariate analysis into the multivariate analysis of postoperative 90-day morbidity, which included skeletal muscle index, handgrip strength, and groups A through D. However, these were obvious variable overlaps because groups A through D were divided according to skeletal muscle index and handgrip strength. Undoubtedly, this is a statistically significant error.

Third, as also shown in the eTable,[1] why not put Child-Pugh classification (or albumin with bilirubin) into the univariate analysis? Admittedly, this variable is well recognized and commonly used for the correlation analysis of postoperative morbidity after liver resection.

Fourth, the authors only showed the results of postoperative 90-day morbidity and mortality as short-term outcomes, but the details on the types of morbidity/complications and the causes of mortality were unavailable in the present article. Actually, it is important for readers to understand which types of complications and which causes of mortality were closely associated with sarcopenia and body composition.

In conclusion, amendment regarding the abovementioned omissions would greatly solidify the conclusions of the study.

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**In Reply** We would like to thank Diao et al for their interest in our work[1] and for their questions. They certainly raised some good points that need further clarification. To answer the first comment, our sample size was calculated on the difference between the sarcopenic and the nonsarcopenic group. Sarco-