

Letters to the Editor

RE: "JOB STRAIN AND THE RISK OF DEPRESSION: IS REPORTING BIASED?"

We read with interest the study by Kolstad et al. (1) published in the *Journal*. Many studies have reported a significant association between job strain and depression. The research by Kolstad et al. questions whether the association between job strain and depression represents a causal effect, proposing instead that it may be due to biased reporting of job strain. To investigate the extent to which "reporting bias" existed, these authors analyzed cross-sectional data collected from 4,291 employees within 378 work units, finding a strong association between self-reported job strain and depression. In order to explore the impact of reporting bias, they developed what they considered to be an unbiased measure of exposure: The mean value of job strain reported by employees without depression was calculated for each work unit. This mean value was then assigned to all employees of the work unit, including the depressed employees of the unit. The authors observed weaker and nonsignificant associations between job strain and both depressive symptoms and diagnosis of depression when using their redefined measure. The authors concluded that "reporting bias inflates associations between job strain and the occurrence of depression, if studies rely on individual self-reports" (1, p. 94).

Another interpretation of the Kolstad et al. result is possible. Within the same work unit, employees may have different perceptions of their work environment and, furthermore, may actually experience different levels of job strain. For example, certain employees may have higher demands and/or lower decision latitude than other employees. These differences may contribute to depression risk. Rather than uncovering a weaker effect due to removal of differential misclassification (exaggerated perceptions of high job strain as a result of being depressed), Kolstad et al. may be diluting a real effect through their substitution of individual ratings with group means and the consequent introduction of misclassification of exposure.

Kolstad et al. assume that the ratings made by nondepressed respondents accurately represent a key counterfactual: the level of job strain that would have been reported by depressed respondents if they were "not in a depressed mood." A better representation of this counterfactual is the perception of those same depressed respondents prior to the onset of their depression, as evaluated in a longitudinal study. A longitudinal study of depression incidence can be safeguarded from reporting bias by obtaining job strain ratings prior to the onset of depression. Any tendency of depressed respondents to overestimate their job strain can thereby be avoided. For example, a study of a nationally representative cohort of employees who did not have major depression in the first 6 years of a 10-year cohort study found that employees who were consistently exposed to high job strain had significantly higher risk of

developing major depression in the subsequent 4 years (2). Such an association is not likely to be inflated by the "reporting bias" referred to by the authors because the respondents were not depressed at the time that they rated their exposure to job strain.

We agree with Kolstad et al. that more objective measures of job strain are needed. However, it seems unlikely that group means of perceived job strain (with exclusion of self-report by the depressed) can act as an appropriate objective measure. Readers should be cautioned about the strong statement by the authors that the association between job strain and depression is inflated by "reporting bias." The weakening of association upon which this conclusion is based may itself be a consequence of bias.

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REFERENCES

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