



Correspondence

Linking food insecurity and smoking cessation: In response to “Food insecurity transitions and smoking behavior among older adults who smoke”



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ABSTRACT

This Letter to the Editor raises questions regarding a recently published article, “Food insecurity transitions and smoking behavior among older adults who smoke.”

In a recent publication (Bergmans, 2019), Bergmans analyzed data from the Health and Retirement Study, of 2197 smokers aged 50 and over. The author hypothesized that food insecurity—operationalized as becoming or remaining food insecure from 2012 to 2014—would be associated with smoking more cigarettes and lower likelihood of cessation in 2014, in comparison to smokers without food insecurity experiences. Contrary to hypothesis, smokers who “became food insecure had a 2.0 (95% CI = 1.1, 3.4) times higher odds of smoking cessation than those who did not report food insecurity” (p 5). Among women, food insecurity was related to “a higher odds of smoking fewer cigarettes and a higher odds of smoking more cigarettes” (p 6 and Fig. 1).

In previously published work (Kim-Mozeleski et al., 2019), we examined this hypothesis, analyzing data from the 2003 and 2015 Panel Study of Income Dynamics. Among adult smokers (assessed in 2003, $n = 1128$), those who became food insecure were less likely to stop smoking compared to smokers without food insecurity (adjusted odds ratio [AOR] = 0.66, 95% CI = 0.46, 0.94). Smokers who were initially food insecure but became food secure were more likely to stop smoking compared to smokers without food insecurity (AOR = 1.20, 95% CI = 1.04, 1.39). Conversely, nonsmokers (assessed in 2003, $n = 3435$) who became food insecure were more likely to start or restart smoking, compared to nonsmokers without food insecurity (AOR = 3.77, 95% CI = 1.25, 11.32). We acknowledge that there are differences between the two studies in terms of sampling, measures, age ranges, and time-frame. In Kim-Mozeleski et al., older adults (aged 55+) were more likely to stop smoking compared to adults aged 40–54; however, the findings were independent of age.

In attempting to understand how the two studies might draw opposing conclusions, we raise some questions regarding Bergmans' study. While smoking cessation is the dependent variable, the analysis may have examined smoking continuation based on the description of the smoking cessation variable; the article states “...a binary variable for smoking cessation, current smokers vs. no longer current smokers (reference group)” (p. 2, Section 2.2.2). Supplemental Table 1 reports that 80.8% ($n = 1733$) of the sample in 2012 and 2014 were food insecure, which is inconsistent with what is reported in Table 1. Although these may be typographical errors that did not impact the analysis, it creates room for questions.

A prior study reported that food insecurity is associated with

smoking patterns related to daily/non-daily smoking (Kim and Tsoh, 2016), but to our knowledge, existing literature does not yet establish quantity of cigarettes. This is a potential novel area of contribution, but we remain puzzled by the finding that “Among women, becoming food insecure was associated with a 2.9 (1.4, 6.2) times higher odds of smoking fewer cigarettes and a 3.0 (1.3, 6.8) times higher odds of smoking more cigarettes” (p 5). This finding appears to have emerged after exploratory stratified analysis when the multinomial model did not show that food insecurity transition was associated with number of cigarettes smoked. Because the bivariate association between food insecurity transition and change in cigarette consumption was described as nonsignificant ($p = 0.22$, Table 1), we question how a multinomial multiple logistic model is justified here. We believe the finding may signal that there is an association between food insecurity and smoking status (whether one is a smoker or not) but cannot disentangle whether it changes the quantity of cigarettes consumed. This is further complicated by the operationalization of the variable, in which “smoking fewer cigarettes” included those who were no longer smokers in 2014.

In light of these issues, we raise questions that will be important towards further understanding how food insecurity impacts smoking.

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References

- Bergmans, R.S., 2019. Food insecurity transitions and smoking behavior among older adults who smoke. *Prev. Med.* 126, 105784. <https://doi.org/10.1016/j.ypmed.2019.105784>.
- Kim, J.E., Tsoh, J.Y., 2016. Cigarette smoking among socioeconomically disadvantaged young adults in association with food insecurity and other factors. *Prev. Chronic Dis.* 13. <https://doi.org/10.5888/pcd13.150458>.
- Kim-Mozeleski, J.E., Seligman, H.K., Yen, I.H., Shaw, S.J., Buchanan, D.R., Tsoh, J.Y., 2019. Changes in food insecurity and smoking status over time: analysis of the 2003 and 2015 Panel Study of Income Dynamics. *Am. J. Health Promot.* 33, 698–707. <https://doi.org/10.1177/0890117118814397>.

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