Author's response to reviews

Title: Smoking, Drinking and Body Weight after Re-employment: Does Unemployment Experience and Compensation Make a Difference?

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Version: 3 Date: 3 December 2008

Author's response to reviews: see over
Dear Dr. Todd,

We would like to thank the reviewers for their comments. We are pleased that Reviewer#1 feels that we have adequately responded to the comments of the initial review. We will address the new comments from Reviewer #2 below.

**Reviewer 2 Comments for the Author..**

1) *I think the revision only tangentially addresses concerns expressed by both reviewers about the conceptualization of alcohol consumption and smoking. These are important issues and failure to address them limits the potential contribution of the paper to the literature.*

In regards to the reviewer’s concern over the conceptualization of alcohol consumption and smoking, we think this refers to a comment echoed by both reviewer 1 and 2 that we should further explore the magnitude of changes in smoking, drinking and body weight. In response to these comments we have performed further analyses to attempt to better quantify the magnitude of the changes reported in our manuscript.

We have added the following to the methods section on page 10 describing the additional analyses we performed:

“*We calculated the mean increase in the number of cigarettes smoked per day between 1999 and 2001. We also calculated the mean increase and decrease in body weight (measured in both pounds and BMI) between 1999 and 2001. Because alcohol consumption was measured as a categorical variable, we were only able to determine if consumption had increased by 1, 2 or 3-4 categories (equivalent to increasing consumption by 1-2 drinks per day, 3-4 drinks per day or 5 or more drinks per day). For all three outcome variables, we investigated any differences in the magnitude of changes by employment status in 2000*”
We have added the following to the results section:

1) Alcohol on pages 11-12:

“Overall, 15.7% of respondents reported an increase in alcohol consumption between 1999 and 2001”

“Among the 604 participants who reported an increase in alcohol consumption, 88.6% increased the amount by 1-2 drinks per day, 8.9% increased the amount by 3-4 drinks per day and 2.5% increased the amount by at least 5 drinks per day. The proportion of individuals increasing their drinking by more than 3 drinks per day was slightly greater among those unemployed in 2000; among those employed, 11.2% increased by 3 or more drinks per day compared to 12.5% and 16.7% of individuals who were unemployed with and without compensation, respectively. The magnitude of the increase in alcohol consumption was not seen to differ greatly between those who were light and moderate/heavy drinkers at baseline in 1999.”

2) Smoking on pages 12-13:

“In the study sample, 7.8% of participants reported an increase in smoking between 1999 and 2001.”

“Among those who increased smoking, the average increase was by 8.5 cigarettes per day (95% CI 7.7-9.4). The average increase was slightly higher among those who were unemployed in 2000 and did not receive compensation. Individuals who experienced unemployment without compensation had an average increase of 9.5 cigarettes per day (95% CI 5.9-13.0). Those who were employed had an average increase of 8.4 (95% CI 7.4-9.3) and those who were unemployed with compensation had an average increase of 5.1 (95% CI 2.3-8.0).”
3) Body weight on page 14:

“Overall, 52.4% of participants reported a decrease in body weight between 1999 and 2001.”

“Among those who decreased weight, the mean weight-loss was 7.1 pounds (95% CI 6.6-7.6) or 0.9 BMI units (95% CI 0.8-1.0). The mean decrease in body weight did not greatly differ according to employment status in 2000; in the employed, the mean decrease was 6.9 pounds (95% CI 6.4-7.4) while in the unemployed groups the mean decrease was 8.0 (95% CI 4.2-11.7) and 8.3 (95% CI 5.2-11.5) for those with and without benefits respectively. Among those who increased weight, the mean increase was by 12.8 pounds (95% CI 12.2-13.4) or 1.8 BMI units (95% CI 0.8-1.0). For those employed in 2000, the mean increase was 12.6 pounds (95% CI 11.9-13.2). For those unemployed with compensation the mean increase was 11.5 pounds (95% CI 8.5-14.6) and among those without compensation the mean increase was 14.8 (95% CI 8.2-21.6). The mean increase and decrease in BMI when stratified by employment status showed a similar pattern to weight change in pounds.”

In light of our new analyses we have modified our discussion of the observed drinking, and body weight changes (modifications shown in blue). On pages 15-17, we have added the following:

“We did not find evidence of large differences in the magnitude of smoking, drinking and body weight changes among employment groups. Among those who decreased body weight, the magnitude of weight-loss was similar in those who were unemployed without compensation and those who were continuously employed in 2000. Similarly, the magnitude of increases in alcohol consumption did not greatly differ between the two groups. Rather, a higher proportion of people who experienced unemployment and did not receive compensation reported weight loss or an increase in alcohol consumption compared to the continuously employed.”
“Although there is strong consensus in considering smoking increases as unhealthy behaviours that increase the risk of early death, we are more tentative in our interpretation of a decrease in body weight. A decrease in body weight is not a healthy sign necessarily because unintended body weight reductions could be a symptom of ill-health, and it is unknown if the observed weight drop was intentional or unintentional. Our findings are consistent with previous research reporting instability in body weight after unemployment, which may reflect a stress reaction. While the association between unemployment compensation and body weight change did not persist when body weight changes were restricted to a change of >5%, we think it useful to report even small changes since modest fluctuations in weight (such as the mean 7 pound weight-loss found in our study) are known to be associated with stress[43].”

“Moderate increases in alcohol consumption, as seen in our study, cannot be uniformly interpreted as detrimental to health. Studies generally report a J-shaped relationship between alcohol use and risk of total mortality with light to moderate drinkers showing a decreased risk compared to abstainers and heavy drinkers[44]. A health-protective effect of alcohol is generally defined as one or two drinks per day for men and one drink per day for women, although some disagreement still exist regarding the cut-offs for healthy drinking[45]. We explored the possibility of limiting our analysis to increases which resulted in unhealthy drinking in 2001 (alcohol consumption of at least 3 drinks a day for men and at least 2 drinks a day for women). However, the number of respondents available was too small and the data available precluded this further investigation due to lack of power. While the higher likelihood of increasing drinking following a period of unemployment without compensation may not translate into an increased risk of poor health outcomes for all members of this group in the short term, we do find our results of concern as it is not possible to predict in which individuals modest increases in drinking will eventually lead to unhealthy drinking patterns[46].”
We have also added the following to the limitations section of the discussion on page 18.

“Because of this small sample size, we were unable to provide precise estimates of the magnitude of changes in smoking and body weight seen in the unemployed groups and limited in our ability to study heavy drinking.”

Again, we are pleased that the reviewer who originally evaluated our paper is satisfied with our revisions, and we hope that these additional clarifications are of use. We believe that the paper provides insights into the relationship between unemployment and health behaviors, and given the current economic climate it should be a very timely publication. Please let us know at your earliest convenience if you find it of interest.

Sincerely,

Kelly Bolton