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The effect of job loss on overweight and drinking

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ABSTRACT

This paper examines the impact of job loss due to business closings on body mass index (BMI) and alcohol consumption. We suggest that the ambiguous findings in the extant literature may be due in part to unobserved heterogeneity in response and in part due to an overly broad measure of job loss that is partially endogenous (e.g., layoffs). We improve upon this literature using: exogenously determined business closings, a sophisticated estimation approach (finite mixture models) to deal with complex heterogeneity, and national, longitudinal data from the Health and Retirement Study. For both alcohol consumption and BMI, we find evidence that individuals who are more likely to respond to job loss by increasing unhealthy behaviors are already in the problematic range for these behaviors before losing their jobs. These results suggest the health effects of job loss could be concentrated among "at risk" individuals and could lead to negative outcomes for the individuals, their families, and society at large.

1. Introduction

Losing a job can be stressful. Beginning with notification and culminating in reemployment, each phase of job loss—anticipation, termination, unemployment, and job search—can produce a forceful emotional response. The potential pathways of stress comprise an assortment of psychosocial and economic factors, including stigmatization, uncertainty, severance of social identity and role, unallocated time, and financial deprivation (Kasl and Jones, 2000).

Individuals over 50 have been disproportionately represented among displaced workers in recent decades (Couch, 1998). Job loss often induces forfeiture of critical health benefits (Beckett, 1988), reduced wealth (Bernheim et al., 2000; Bernheim, 1997), and obstacles to reemployment (Chan and Huff Stevens, 2001; Hipple, 1999). Further, when reemployed, workers over 50 experience significant wage penalties (Couch, 1998; Huff Stevens, 1997). A growing body of research has linked late-career job loss to a range of adverse health and chronic disease outcomes (Gallo et al., 2006a,b) and mortality (Sullivan and von Wachter, 2009). In this paper, we study the effect of business closures on body mass index and alcohol consumption using data on workers nearing retirement. We use finite mixture models to examine whether there are differential effects of job loss by latent class and, upon finding substantially heterogeneous effects, explore the determinants of the classes.

Alcohol misuse is a critical social concern for older individuals. Because older individuals have less lean body mass, they attain higher blood alcohol content for a given amount of alcohol consumed (Vestal et al., 1977), and for any given blood alcohol level, there is an intensified sensitivity to alcohol (Vogel-Sprott and Barrett, 1984). Alcohol can contribute to difficulties with reaction, balance, and elements of cognitive function, increasing the probability of automobile collisions, falls, and both home and workplace accidents. In addition, alcohol use may exacerbate chronic health problems, such as high blood pressure, ulcers, and diabetes, which are more common among older individuals. There is, moreover, a potential for alcohol–drug interactions, as older people take more prescription and over-the-counter medications than younger individuals (Williams, 1984). Risk of late-onset alcoholism (Hurt et al., 1988) is also of concern.

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Obesity may be similarly problematic for the middle aged and near elderly. Obesity is a well-established risk factor for cardiovascular disease, high blood pressure, and diabetes, and some research has associated obesity with shorter life expectancy. Simulation data suggest that obese older persons can expect to live fewer years disability free than their normal weight counterparts and have higher incidence of diabetes, hypertension, and heart disease, with significantly burdensome healthcare costs paid by Medicare (Lakdawalla et al., 2005).

Nevertheless, evidence on the effects of job loss on health behaviors has been decidedly mixed (McKee-Ryan et al., 2005). This is especially true with regard to the health behaviors of interest in this research. Studies investigating the impact of job loss and unemployment on alcohol consumption have produced inconsistent results in terms of significance, magnitude and even direction of effect. Several assessments have found no relationship between unemployment and subsequent alcohol use (Broman et al., 1995; Cook et al., 1982; D'Arcy, 1986; Gallo et al., 2001; Morris et al., 1992, 1994). Increases in alcohol consumption (Catalano et al., 1993; Janlert, 1992) have been documented; however, it has been argued that these associations are related chiefly to selection (Kasl and Jones, 2000). Reductions in alcohol consumption after job loss have also been reported in population-based studies (Iversen and Klausen, 1986). Economic research linking macroeconomic conditions to health (Ruhm, 2000, 2005) has found that recessions tend to reduce drinking, presumably in part due to reduced income.

Findings from research on changes in weight associated with unemployment are similarly ambiguous (Leino-Arjas et al., 1999; Morris et al., 1992, 1994). Retrospective evidence (Leino-Arjas et al., 1999) has suggested a link between unemployment and BMI, but no panel study of which we are aware has found a significant change in BMI after job loss. One longitudinal study, which used data from the British Regional Heart Study (Morris et al., 1992), did however find that middle-aged men who became unemployed had a higher risk of gaining more than 10% of their body weight (measured as a dichotomy) than similar continuously employed men.

There are several potential mechanisms that may help explain the wide variation in the individual behavioral responses to the stress of job loss. The first may be thought of as differences in stress-reactivity (Torres and Nowson, 2007). Thus, although greater alcohol or food consumption might be employed to counterbalance neuro- or emotion-regulatory disturbances, reduced consumption or no change in consumption are equally plausible. So while there is evidence from animal, preclinical and clinical studies that stress leads to overeating and excessive drinking to self-medicate (Sinha, 2007), research on stress suggests substantial heterogeneity. To date, differences in response to stress have been explained by such factors as coping style, genetic proclivity, and other aspects of family history (Moore et al., 2007). Second, income and substitution effects may also contribute to the ambiguity of earlier findings. Unemployment frequently diminishes income, creating financial constraints that may generally reduce the demand for food or alcohol, and alter the demand for specific items. Even so, the results of deprivation are again uncertain. For example, with less income, displaced workers may simply eat less or forgo alcohol use; however, they may simply substitute lower-priced, calorie-rich food or less costly alcohol for their normal consumption items. Finally, for some individuals, the increase in discretionary time due to unemployment may be used to pursue health-promoting behaviors, such as physical activity, that might precipitate weight loss or encourage alcohol temperance. Plausibly opposing effects render the net impact of job loss an open empirical issue.

Table 1
Variable details.

Variable name	Coding algorithm/variable details
Outcome variables	
BMI	Body mass index
DRINKS	Number of drinks of alcohol per day on the days that they drink.
Independent variables	All explanatory variables are lagged
Business closure	1 = Business closed between waves; 0 = Otherwise
Age	Age in years
Male gender	1 = Male; 0 = Female
Married civil status	1 = Married; 0 = Not married
Black race	1 = Black; 0 = Non-black
Education	Years of education
Depressed	Abridged version of the Center for Epidemiologic Studies-Depression (CESD) Scale—sum of answers to eight questions that asked if during the past week, the respondent felt depressed, felt that everything he did was an effort, experienced restless sleep, could not get going, felt lonely, felt sad much of the time, enjoyed life and was happy. The last question was reverse coded so that a higher score represents more depressive symptoms *Note*: Standardized to have mean zero and variance one
Household income	Total (respondent + spouse) household income. It is the sum of the following: earnings; household capital income; income from all pensions and annuities; income from social security disability and supplemental security income; income from social security retirement, spouse or widow benefits; income from unemployment and worker's compensation; income from veteran's benefits, welfare and food stamps; alimony, other income, and lump sums from insurance, pension and inheritance *Note*: Divided by 10,000 for scalar consistency and deflated to 1992 USD. We used the logarithm value of income and added 0.01 to deal with the log(0) issue
Job stress	1 = Strongly agrees that current job involves lots of stress; 0 = Otherwise
Physical effort	Extent to which job requires lots of physical effort: 1 = all/almost all the time; 2 = most of the time; 3 = some of the time; 4 = none/almost none of the time
Occupational categories	Binary(1/0) indicators for the following categories: Managerial; Clerical & Administrative Support; Sales; Mechanical, Construction & Precision Production; Services (including private household, protective, food preparation, health and personal service); Operators, Fabricators & Laborers; Farming, Forestry & Fishery. The reference category was Professional and Technical Support and Armed Forces
Risk averse	1 = Least risk averse; 2 = 3rd most risk averse; 3 = 2nd most risk averse; 4 = Most risk averse
Financial planning horizon	1 = Next few months; 2 = Next year; 3 = Next few years; 4 = Next 5–10 years; 5 = Longer than 10 years
Cognitive score	Categorical variable takes values 0–25. Higher score represents greater cognitive function
Region dummies	Binary (1/0) variables for the following Census regions of residence: region 2 = Mid Atlantic; region 3 = EN Central and WN Central; region 4 = S Atlantic; region 5 = ES Central and WS Central; region 6 = Mountain and Pacific. The omitted category is region 1 = New England