Emergence of depression following job loss prospectively predicts lower rates of reemployment

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A B S T R A C T

Job loss has been associated with the emergence of depression and subsequent long-term diminished labor market participation. In a sample of 500 adults who lost their jobs, trajectories of depression severity from four years before to four years after job loss were identified using Latent Growth Mixture Modeling. Rates of unemployment by trajectory were compared at two and four years following job loss. Four trajectories demonstrated optimal model fit including resilience (72%), chronic pre-to-post job loss depression (9%), emergent depression (10%), and remitting depression (9%). Logistic regression comparing reemployment status by class while controlling for age, gender, and education at two-years post job loss revealed no significant differences by class. An identical logistic regression on four-year reemployment revealed significant differences by class with post-hoc analyses revealing emergent depression resulting in a 33.3% reemployment rate compared to resilient individuals (60.4%) together indicating that depression affects reemployment rather than lack of reemployment causing the emergence of depression. The emergence of depression following job loss significantly increases the risk of continued unemployment. However, observed high rates of resilience with resulting downstream benefits in reemployment mitigates significant concern about the effects of wide spread unemployment on ongoing global economic recovery following the Great Recession.

1. Introduction

The Great Recession that began in 2007 was the largest global economic downturn of the post-World War II era, and it resulted in a record rise in unemployment and a persistent increase in long-term unemployment that continues to threaten overall economic recovery (Elsby et al., 2010). While the United States is no longer in a recession, the labor market remains historically weak, threatening the long-term vitality of the current post-recession economic recovery (Rothstein, 2011).

While many factors influence long-term unemployment, a key factor of concern to some economists is the "psychological harm" caused by unemployment, which can impact motivation, sense of control, confidence, and self-respect (Sen, 1997; Winkelmann and Winkelmann, 1998). Rates of depression among the unemployed are nearly double that of employed individuals causing a significant economic burden to society (Greenberg et al., 2003). Previous research has demonstrated that unemployment is associated with increases in unhealthy behaviors such as alcohol and tobacco consumption, as well as weight gain and incidence of myocardial infarction and stroke (Deb et al., 2011; Falba et al., 2005; Gallo et al., 2006). There are a number of reasons why unemployment may result in distress. Psychological disorders are prevalent among socially disadvantaged individuals, and employment status is a particularly relevant component of social privilege (Fryers et al., 2003). Research has also demonstrated that social causation, through such factors as ongoing stress and adversity, may be especially key to the onset of depression in some individuals (Dohrenwend et al., 1992). In addition, health selection plays a role in both job loss and ongoing unemployment, as individuals with physical or psychological ailments are more likely to lose their jobs and are less likely to be rehired (Mastekaasa, 1996; Thomas et al., 2005). Furthermore, the stigma of joblessness may make employers view applicants as less desirable the longer unemployment persists (Obetholzer-Gee, 2008). In turn, self-perception of low social status may result in psychological distress and physical ailments (Singh-Manoux et al., 2003), thereby increasing the likelihood of poor health selection in the job market. Unemployment may impact perception of personal efficacy and locus of control, and can also cause a sense of subjective helplessness (Goldsmith et al., 1996). Indeed, unemployment has been shown to have a "scarring effect" on individuals' sense of

wellbeing, which continues even after the financial harm of job loss has dissipated (Clark et al., 2001; Lucas et al., 2004). For this reason, the psychological toll of unemployment is a relevant issue deserving of further study.

These observations have caused concern that psychological factors, particularly the emergence of depression which has been shown to be common following unemployment and to increase with the duration of unemployment (Mossakowski, 2009), can cause a continued drag on the economy due to the impact of job loss on motivation, productivity, and particularly reemployment (Ginexi et al., 1999; Lerner et al., 2004; Vinokur and Schul, 2002; Whooley et al., 2002).

The negative psychological effects of unemployment, coupled with high rates of job loss in the past decade, provide a sobering prognosis for labor productivity as the economy expands and new jobs become available. Recent research however, has demonstrated that major life stressors, including unemployment, do not have uniform effects across the population on depression and related constructs such as wellbeing and distress (Bonanno et al., 2012; Galatzer-Levy et al., 2010, 2011; Galatzer-Levy and Bonanno, 2012, 2014). By utilizing prospective population based samples, these studies have demonstrated that the majority of individuals, typically upwards of 70% of the population, are resilient as characterized by sustained high functioning or low symptoms in response to an incident stressor. Further, prospective studies of depression have demonstrated that rates of depression following an incident stressor are frequently inflated due to the conflation of those who were already depressed with those who develop depression in response to the incident event (Burton et al., 2014; Galatzer-Levy and Bonanno, 2012, 2014; Zhu et al., 2014). Previous studies leave open key questions including the rates of emergent depression following job loss and the effects on subsequent labor market participation. Further, it remains unclear whether depression following job loss is a determinant of continued unemployment, or whether an inability to find a job results in the emergence of depression (See Fig. 1).

The current study utilizes a large, longitudinal, population based panel dataset to identify prospective trajectories of depression severity in response to job loss. Further, rates of reemployment at two and four years post-loss are examined in relation to the identified trajectories to determine whether variability in unemployment rates by trajectory occur prior to or subsequent to the emergence of depression.

2. Methods

Data were drawn from the Health and Retirement Study (HRS), a 24-year longitudinal study of more than 20,000 American adults. Data on financial assets, employment and mental and physical health were collected via biennial interviews and self-report measures beginning in 1992 and continuing through the present day.

2.1. Participants and procedure

A sample of N=500 individuals who lost their jobs between the years 1996 and 2006 were selected into the current study. The mean age was 59.77 (SD=7.85), and the range was from age 32 to 94. The
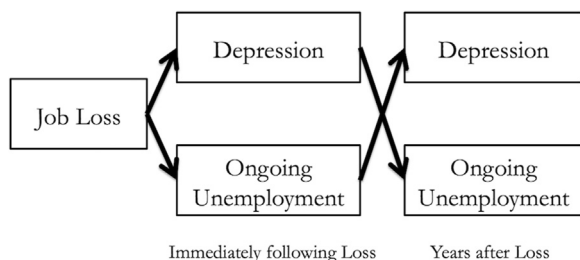

Fig. 1. Schematic representation of research question pertaining to temporal relationship between depression and ongoing unemployment.

Table 1
Sample demographics (N=500).

	Percentage	Mean	SD
Age	–	57.77	7.85
Years of education	–	12.32	3.15
Income prior to job loss	–	$28,559.70	$28,121.12
Sex			
Male	45.6%	–	–
Female	54.4%	–	–
Occupation type			
Blue-Collar	64.8%	–	–
White-Collar	35.2%	–	–
Reason for job loss			
Termination	64.0%	–	–
Business closure	36.0%	–	–

mean number of years of education was 12.32 years (SD=3.15), 82.0% was Caucasian, and 54.4% was female. Mean annual income prior to job loss was $28,559.70 ($SD$=28,121.12) and mean debt amount was $3108.23 ($SD$=8206.15). The majority (64.0%) reported job loss due to termination while the remaining 36% reported job loss due to business closure, and 64.8% lost a blue-collar job while 35.2% lost a white-collar job (See Table 1).

2.2. Measures

2.2.1. Depression symptomatology

Depression was assessed using an abbreviated version of the Center for Epidemiological Studies- Depression (CES-D) scale (Radloff, 1977). This 8-item abbreviation asks participants whether they experienced a number of depressive symptoms in the past week using a binary rating system (0= did not experience, 1= did experience). The CES-D short form has demonstrated high internal consistency (Kohout et al., 1993).

2.2.2. Health

During each wave of data collection participants were asked to rate their self-perceived health status using a five-point Likert-type scale in which 1 indicates "excellent" and 5 indicates "poor."

2.2.3. Reemployment

was defined in the current study as employment status four years following job loss.

2.2.4. Occupation type

Consistent with previous research that utilized the HRS dataset to examine the effects of job loss (Gallo et al., 2006), occupation type was defined as either blue-collar or white-collar. Blue-collar occupations included forestry, military, fishing, farming, production and operations. White-collar occupations included those in administrative, managerial, professional, clerical, sales and service fields.

2.2.5. Reason for job loss

Sample selection was based on the criterion of job loss due to either termination or business closure. In the analyses, this classification was represented by a binary variable. Retirement was not included as a reason for job loss; thus, all participants lost their jobs involuntarily rather than voluntarily.

2.3. Data analytic strategy

A "floating baseline" design was utilized where observations across multiple panels are centered around the year of job loss to facilitate the identification of depression response from before to after job loss (Galatzer-Levy et al., 2010). In the current study, two time points before and two time points after self-reported job loss were utilized. Time 1 measurements occurred 2 years prior to job loss, Time 2