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"Good jobs" to "bad jobs": replicated evidence of an employment continuum from two large surveys

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Abstract

The goal of this study was to offer an expanded conceptualization of the employment continuum and test its utility by examining the association of different employment statuses with physical health and depression. Using data from two large cross-sectional surveys we develop five different employment categories (i.e., "optimal", "economically good", "psychologically good", "barely adequate", and "inadequate" employment) in addition to unemployment to form an employment continuum. Evidence from these studies indicates that less than optimal forms of employment are not randomly distributed throughout the population, and that a substantial number of adults are working in "inadequate or "barely adequate" jobs. Moreover, our analyses revealed a consistent association between less than optimal jobs and poorer physical and mental health among adults. We conclude our paper by discussing important policy implications of these findings and offering suggestions for future research.

Keywords: USA; Employment continuum; Mental health; Physical health

Introduction

Employment arrangements are clearly not created equal as evidenced by everyday expressions such as "I need to get a better job"; yet, a cursory glance at the broad employment literatures indicates that different disciplines focus on separate discipline-specific work characteristics that make up optimal employment arrangements. Psychologically oriented researchers regard jobs that offer a high degree of control and a low level of external demands as optimal (Karasek & Theorell, 1990), while other social scientists focus on the psychological, social or economic resources that employment offers (Dooley, Prause, & Ham-Rowbottom, 2001; Kalleberg, Reskin, & Hudson, 2000; Warr, 1994). But these aspects of work need not remain isolated from each other. The primary goal of this paper was to offer a construct that joins several of these aspects of work into an employment continuum reflecting a range of job types from optimal to inadequate. To test its utility, this construct is operationalized and its association with health indicators is measured in two large cross-sectional surveys.

Motivating this synthesis is the desire for a comprehensive framework within which to study the consequences of individual or population-level employment transitions. Separate literatures pay close attention to more refined subcategories of the work experience and estimate the health-related consequences of variations within these sometimes-narrow categories (e.g., changes in stress brought about by corporate adjustments, transitions from unemployment into any type of employment). An expanded conceptualization of the employment continuum could allow a wide-angle view of employment status, thereby permitting estimates of the personal consequences of a more comprehensive set of employment transitions. For example, evidence indicates that the consequences of job loss depend, in part, on the psychological demands of the former job (Warr, Banks, & Jackson, 1988), but would the same

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pattern hold for individuals transitioning into various types of underemployment (Clogg, 1979; Sullivan, 1978)? Conversely the personal benefit of gaining employment may also depend upon the relative quality of the acquired job (Jahoda, 1982). These types of questions are of profound interest, particularly in the United States, where the "reorganization of work" is creating new occupational health concerns (National Institute of Occupational Safety and Health, 1996) and labor market projections anticipate growth in marginal types of employment (US Department of Labor, 1999).

The continuum to be described here represents the confluence of three distinct research traditions: the study of unemployment, economically inadequate employment, and psychologically demanding employment. After sketching each approach, the remainder of the paper operationalizes this continuum and describes two empirical tests using individual physical and mental health as outcomes.

Unemployment

Jobs, or paid employment, provide financial and social resources as well as opportunities for social interaction, time structure, and a sense of personal identity (Jahoda, 1982). Attenuation of these resources through job loss is frequently experienced as stressful, and has been documented to contribute to a variety of adverse consequences (Kasl, Rodriguez, & Lasch, 1998). Consistent with Jahoda's (1982) argument that employment, not the quality of employment, is the primary concern of those without work, a substantial body of evidence clearly suggests that employment promotes, among other things, improved physical and mental health (Dooley, Fielding, & Levi, 1996; Ross & Mirowsky, 1995). New evidence is emerging, however that challenges this basic framework.

Inadequate employment

Economists early on noted that when workers lose full employment they may accept partial employment, for example working involuntarily part time or at lower wages. Such economically inadequate work has been termed "disguised unemployment" (Robinson, 1936), but it is not reflected in the standard unemployment statistics. However some labor sociologists and economists have recognized such inadequate employment as part of a broader labor utilization framework (Clogg, 1979; Sullivan, 1978; Sullivan & Hauser, 1979). From this perspective different forms of unemployment and inadequate employment together constitute "underemployment".

Unlike the long research tradition examining the effects of unemployment, studies of the effects of economically inadequate employment are much more recent and sparse. If disguised unemployment is more like regular unemployment than adequate employment in its effects, then the dichotomous employment status approach of the unemployment literature seems too narrow. The few studies of this question have found inadequate employment's adverse effects to be more like those of job loss than continuing adequate employment (Dooley & Prause, 1998; Prause & Dooley, 1997). Thus there is an empirical basis for expanding the employment continuum to include at least three statuses—unemployment, economically inadequate employment, and economically adequate employment. However, employment might be adequate without being optimal in either economic or psychological terms.

Psychologically demanding employment

The third research approach focuses primarily on psychological and social aspects of work. From these perspectives the overall adequacy of an employment arrangement is distinguished by the relative level of different features of jobs such as decision latitude, job demands, social support at work, and the availability of money and other forms of remuneration (Karasek & Theorell, 1990; Warr, 1994). In this model, the relative absence of desirable job characteristics creates psychological demands or stress for the worker that undermines worker health (Warr, 1994).

Characteristics representing different psychological and social aspects of work are frequently used independently however to invoke the idea of employment adequacy. The Jobs Demands model, for example, contends that the most optimal employment arrangement is characterized by high levels of decision latitude and low to moderate levels of job demands (Karasek & Theorell, 1990). Recently, Kalleberg and colleagues (2000) used non-income attributes of employment such as overall job security, and the availability of non-income benefits like pensions and health insurance to differentiate "good jobs" from "bad jobs" (Kalleberg et al., 2000). But these characteristics need not be viewed in isolation because jobs may vary not only in the income they provide but also in non-income attributes (e.g., health and retirement benefits) as well as psychological characteristics of the job (e.g., decision latitude and demands). Consequently, one might expand the employment continuum characterized in the previous section discussing inadequate employment to include additional employment statuses based on the relative levels of desirable psychological and other non-income attributes of jobs.

When combined with the previously discussed categories of unemployment and disguised unemployment, the additional types of adequate employment characterized by psychological characteristics of jobs and non-income benefits of work constitute a broad continuum

of mutually exclusive employment categories ranging from complete joblessness to optimum employment (Warr, 1994). While there is evidence for a health connection for each of these subcategories when studied in isolation, the overall association between this global construct and health has not been studied.

This condensed overview of different perspectives on employment clearly indicates that employment is complex and characterized by a rich array of plausible dimensions that can influence its overall adequacy. This complexity raises a fundamental question: is there benefit to collapsing the complexity of the employment experience into a somewhat unidimensional continuum? There are several reasons for exploring an expanded employment continuum. First, although the full complexity of an $n \times m$ matrix of employment characteristics (n levels of one dimension by m levels of another dimension for the simplest two-dimensional case) is lost, the continuum is clearly more refined and sophisticated than the employment/unemployment dichotomy that is currently used as a broad indicator of economic vitality. Second, by bringing together concepts from different research traditions, scholars can move toward a more interdisciplinary synthesis that might identify isomorphic concepts, and perhaps better differentiate concepts that mediate the effects of adverse employment change from those that moderate the relative effects of such employment change. Finally, as discussed earlier, an employment continuum provides the opportunity to monitor, evaluate and potentially forecast the individual and aggregate effects of more subtle employment transitions brought on by economic trends (e.g., growth of contingency or limited term employment) and shifts in employment policies. In summary, the employment continuum concept is not offered as a substitute for a more refined analysis of employment. Rather it is an interdisciplinary tool that provides notable benefits not available in discipline-specific approaches working in isolation.

Employment continuum versus socioeconomic status

The existence of occupational status as one important indicator of socioeconomic status (Hauser & Warren, 1997) may seem to make redundant this paper's construct of an employment continuum. However, employment status as it is conceptualized here is distinct from SES operationally and theoretically. Although the employment status continuum incorporates one common indicator of SES (viz. earnings), it also integrates both psychological and non-income economic aspects of work thereby creating a construct that is operationally different from social rank or occupational prestige. Theoretically, SES reflects an individual's location in the social hierarchy based upon her/his ability to consume and create desired goods (Hauser & Warren, 1997), while employment status or adequacy reflects the relative clustering of desirable characteristics of jobs. Although "good jobs", or those characterized by higher levels of desirable characteristics are frequently allocated to higher status individuals, broad economic cycles as well as technological advances and idiosyncratic goals and values of different employers also give rise to the variations in the structure of work (Fenwick & Tausig, 1994; National Institute of Occupational Safety and Health, 1996; Tausig & Fenwick, 1999). Thus SES seems best treated as a structural but incomplete cause of employment adequacy. The degree to which SES and our employment continuum concept correlate with each other is an empirical question that is addressed later in this paper.

Research questions and hypotheses

This study provides both descriptive analyses and hypothesis testing of the employment continuum construct. The descriptive analyses are intended to provide evidence of concurrent and discriminant validity for the employment continuum construct by addressing two basic research questions: (1) What is the overall distribution of different types of jobs in the adult labor force and are there differences in the distribution of more and less optimal jobs between individuals within demographic subgroups (e.g., age, gender, ethnicity)? The answer to this question, if it parallels previous demographic reports of underemployment, would provide concurrent validity for the employment continuum construct. (2) What is the empirical association between SES and employment status? If employment status is distinct from SES, there should be a null or modest association between measures of SES and the employment status continuum.

The core hypothesis of this paper, consistent with several lines of previous theory and research, is that high quality jobs provide a foundation for healthier workers, stronger communities, and perhaps other macro-level benefits. Thus, the criterion validity of the employment continuum construct ultimately rests on its association with relevant individual, organizational, and social outcomes. In this study we test the hypothesis that more optimal employment is associated with better physical and mental health using bivariate and multivariate methods.

Method

Data bases

Study 1: The California Work and Health Survey

Data for the first study are from the 1998 wave of the California Work and Health Survey, a telephone based

longitudinal survey of 1771 California adults. Of the respondents, 1500 were obtained through random-digit dialing and the remaining 271 were obtained through oversampling procedures to increase the accuracy of survey estimates among African Americans, Asian/Pacific Islanders, and persons with disabilities. The survey was designed by faculty and staff of the Work and Health Program at the University of California, San Francisco, with input from researchers and practitioners in the fields of health and economics. It was conducted by the Field Institute and funded by a grant from the California Wellness Foundation under the Work and Health Initiative. The survey is unique in its extensive coverage of employment status, working conditions, and of physical and mental health status. The overall response rate of the telephone survey was 56%. Sampling weights allow this sample to match the composition of the California population in terms of household size, age, gender, race/ethnicity, and region. (For additional information on the California Work and Health Survey see http://medicine.ucsf.edu/programs/cwhs/design.html.)

Study 2: The National Survey of Midlife Development in the United States (MIDUS)

Data for the second study are from the National Survey of Midlife Development in the United States (MIDUS) collected in 1995 by the John D. and Catherine T. MacArthur Foundation Network on Successful Midlife Development. MIDUS respondents are a nationally representative random-digit-dial sample of non-institutionalized, English-speaking adults aged 25–74 who completed a telephone interview and two self-administered mailback questionnaires. The response rate for the telephone interview and mailback questionnaires were 70% and 86.8%, respectively, yielding an overall response rate of 60.8% for both parts of the survey ($n = 3032$). Sampling weights correcting for selection probabilities and non-response allow this sample to match the composition of the US population on age, sex, race and education. (For detailed technical report regarding field procedures, response rates and weighting see http://midmac.med.harvard.edu/research.html#tchrpt.)

Measures

We attempted to create comparable operational definitions of our employment categories in both data sets, but differences in the items available in each survey did not allow exact replication. Table 1 provides a description and direct comparison of how each mutually exclusive employment status category was constructed in each data file. To summarize however, we began operationalizing the employment continuum using the guidelines proposed by Clogg (1979) for categorizing workers as *unemployed*, working in economically *inadequate* jobs, and economically adequate employment (i.e., work that is not economically inadequate). (The Labor Utilization Framework (Clogg, 1979) also includes "involuntary part-time employment" and "discouraged workers", but there were insufficient items in both data files to adequately operationalize these employment statuses.)

Preliminary principal axis factor analyses of the economic, non-income, and psychological aspects of work indicated two factors with eigenvalues greater than one, with the economic and non-income aspects of work loading on one factor and the psychological attributes loading on the second. Based upon this evidence, workers who were adequately employed were then further subdivided into different categories based upon the relative presence of favorable economic or non-income aspects of work as well as favorable psychological characteristics of work. *Barely adequate jobs* are characterized as those that are better than *inadequate jobs*, but they do not provide basic levels of economic or non-income resources or psychological attributes. *Economically good jobs* provide adequate economic or non-income resources but they lack basic psychological attributes, while *psychologically good jobs* provide adequate psychological attributes, but they do not provide basic economic or non-income resources. *Optimal jobs* provide adequate economic or non-income resources and adequate psychological attributes.

Health outcomes

In both the CWHS and the MIDUS *poor physical health* was operationalized using a standard self-report (Patrick & Bergner, 1990): "In general, would you say your health is excellent (5), very good (4), good (3), fair (2) or poor (1)?" Respondents who answered "fair" or "poor" were coded 1, otherwise they were coded 0. *Depression* was operationalized in the CWHS using a summed scale of 15 depressive symptoms from The Short Geriatric Depression Scale, and then dichotomized such that individuals reporting seven or more symptoms were coded as 1 (Rule, Harvey, & Dobbs, 1989; Sheikh & Yesavage, 1986). In the MIDUS, *depression* was operationalized using the Composite International Diagnostic Interview Short Form (Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998).

Demographic characteristics

Age (continuous), gender (female = 1), marital status (married = 1), educational attainment (less than high school education, high school education or General Equivalency Degree, some college, and college graduate), was operationalized in the same way in both surveys. A broader range of race/ethnicity categories were available in the CWHS (white, black, Hispanic, and Asian dichotomous indicators) in contrast to the

Table 1
Summary of employment status categories and the items used to operationalize each category

	CWHS	MIDUS
Unemployed	Not currently working but reported looking for work in the past 4 weeks. Operationalized using supplied "Labor Force Status" variable	Not currently working but reported looking for work. Operationalized using self-reported item to "no currently working but looking for work"
Inadequate employment (poverty wage job)	Currently working, but *household earnings* were below federal poverty standards for respondent's household size. Operationalized using supplied "Household Poverty Status" variable	Currently working, but *personal earnings* were below federal poverty standards for a single person household (<$9000). Operationalized using self-reported personal earnings
Barely adequate Job	Currently working and *household earnings* were above poverty standards, but the job provided less than *two* economic or non-income resources and less than two psychological attributes[a]	Currently working and *personal earnings* greater than $9000, but the job provided less than *three* economic or non-income resources and less than two psychological attributes[b]
Economically good job	Currently working and the job provided at least two economic or non-income resources but less than two psychological attributes[b]. The economic and non-income aspects of work were: *Adequate earnings* (personal earnings ⩾ $20,000; House et al., 1990); *stable employment* (no job loss in last year, less than 15 weeks of unemployment in past year, and expectations to keep job in the future); and *employer sponsored insurance* (reports employer pays most or all of health insurance premium)	Currently working and the job provided at least three economic or non-income resources but less than two psychological attributes[c]. The economic and non-income aspects of work were: *Adequate earnings* (personal earnings > $20,000); stable employment (less than 15 weeks of unemployment in past year; *employer sponsored pension* (reports participating in an employer sponsored pension plan); and *employer sponsored insurance* (reports having insurance through employer)
Psychologically good job	Currently working and the job provided at least two psychological attributes but less than two economic or non-income resources[c]. The psychological attributes were: *High decision latitude* (more than the sample mean), low job demands (less than the sample mean); high support at work (reported "highly satisfying co-worker relations")	Currently working and the job provided at least three economic or non-income resources but less than two psychological attributes[c]. The economic and non-income aspects of work were: *High decision latitude* (more than the sample mean), *low job demands* (less than the sample mean); *high support at work* (more than the sample mean)
Optimal job	Currently working and the job provides two or more economic or non-income resources and two or more psychological resources	Currently working and the job provides three or more economic or non-income resources and two or more psychological resources

[a] Respondents who could not be classified as high or low on both the economic characteristics and the psychological characteristics of jobs because of missing data were eliminated from the analyses ($n = 36$ from the CWHS and $n = 21$ from the MIDUS). Respondents who had low, valid score on one indicator (e.g., economic or psychological characteristics) but could not be classified on the other were categorized as low on the missing indicator under the assumption that missing data are more likely for individuals working in undesireable jobs. More specifically, in the CWHS, 14 respondents were coded as being in a "barely adequate" job because they had a low level of economic characteristics but they were unable to be classified on the psychological characteristics. Similarly another 14 respondents were coded as being in "barely adequate" jobs because they reported a low level of psychological characteristics and lacked economic data. In the MIDUS, 161 respondents were coded as being in a "barely adequate" job because they had a low level of economic characteristics with no psychological data. (A disproportionately high number of MIDUS respondents could not be classified on psychological job characteristics because of the way support at work questions were asked. Individuals who did not have co-workers or who did not have a supervisor were given the opportunity not to answer the questions.) Another 57 respondents were also coded as being in "barely adequate" jobs because they reported a low level of psychological characteristics, but were unable to be classified on economic characteristics. Multivariate models using only those respondents who had valid scores on all the items used to classify employment status yielded no notable differences in the results.

[b] Individuals who could not be classified on the psychological characteristics of their jobs because of missing data but whose valid economic characteristics met the outlined threshold were coded as being in "economically good" jobs ($n = 54$ in the CWHS and $n = 45$ in the MIDUS).

[c] Individuals who could not be classified on economic characteristics but who had valid scores on the psychological characteristics and who exceed these cut-point were coded as being "psychologically good" jobs ($n = 19$ in the CWHS and $n = 37$ in the MIDUS). Operationalizations of employment statuses from the California Work and Health Survey (CWHS) and the National Survey of Midlife Development in the United States (MIDS).

MIDUS (black = 1), while household earnings was defined categorically in CWHS and as a continuous item in MIDUS. Finally measures of wealth (i.e., assets) and self-reported physical and mental health at the age of 16 were available in the MIDUS only.

Statistical analyses

Logistic regression analyses were used to consider the effects of employment status on poor physical health and depression. After demographic variables were included in the model, the importance of employment status, using dummy variables with optimal employment as the reference group, was evaluated.

Results

The demographic profile of Californians from the CWHS was noticeably different from the national profile obtained from the MIDUS. Estimates generated from each data set using sampling weights that allow each sample to represent the larger population (state or national) indicated that CWHS respondents were younger than MIDUS participants ($M = 36.63$, SD = 12.41 versus $M = 42.03$, SD = 11.21), a smaller proportion of the CWHS sample were female in contrast to the MIDUS sample (43% versus 52%), and the California sample was more racially and ethnically diverse than the national sample (65% white versus 88%). Although there was a similar percentage of respondents with less than a high school degree in both data sets (11% and 10% for CWHS and MIDUS, respectively), a slightly higher percentage of CWHS respondents in contrast to the MIDUS respondents reported having some college training (31% versus 27%) or a college degree (35% versus 26%). The single most commonly reported household earnings category among CWHS respondents (26%) was $20,000–$40,000 while the average household earnings reported by MIDUS respondents was $44,804 (SD = 35,684). Nine percent of CWHS survey respondents reported being in fair/poor physical health versus 12% of MIDUS respondents, and 6% of Californians met the study criteria for depression while 14% of the national sample met DSM-IIIR criteria for 12-month depression.

Distribution of employment

In both California and across the nation most adults were employed in adequate jobs, however a sizeable minority of adults found themselves in "barely adequate" jobs (10.0% and 17.1% in California and nationally) or "inadequately employed" (10.1% and 15.4% in California and nationally; see Table 2a and b). Among Californians in the labor force, workers who were white, middle aged, and had a higher level of education were more likely to find themselves in "good jobs" (e.g., "optimal" or "economically good"; see Table 2a). By contrast younger adults, people of color and those with a low level of education were disproportionately represented in "bad jobs" (e.g., "barely adequate" or "inadequate").

Consistent with recent reports using data representative of the population (Jensen, Findeis, Hsu, & Schachter, 1999; Kalleberg et al., 2000), employment status differed by age, gender, race/ethnicity and by education in our national sample (see Table 2b). Specifically, labor force participants over 62 years of age were more likely to be working in "inadequate" jobs than their younger counterparts. Fewer working women than men were employed in "optimal" or "economically good" jobs, and more women than men were working in "barely adequate" or "inadequate" jobs. A higher percent of blacks were unemployed in contrast to non-blacks. Finally, respondents with a better education were more likely to be employed in "optimal" or "economically good" jobs, while a lower percent of better-educated respondents were "inadequately employed" or unemployed.

We considered whether employment status is simply another proxy for socioeconomic status (SES). The association between educational attainment and employment status in both the state and national samples was modest ($r_s = -0.24$, $\tau = -0.19$; $p \leqslant 0.001$ in the CWHS; $r_s = -0.27$, $\tau = -0.22$; $p \leqslant 0.000$ in the MIDUS). Additionally, there was a medium-sized association between occupational status, operationalized using a male-based modified Duncan Socioeconomic Index for the employed respondents only (Stevens & Featherman, 1981), and employment status ($r_s = -0.31$, $\tau = -0.26$; $p \leqslant 0.000$) in the national sample. As might be expected, individuals with a higher occupational status were more likely to be classified as being in "optimal" and adequate jobs, while lower status individuals were disproportionately represented in the "barely adequate" or "inadequate" jobs (see Table 2b). It is interesting to note that over 50% of individuals in the bottom quartile of occupational status find themselves in "optimal" or other forms of adequate employment. Clearly employment status and different indicators of SES are associated. However more or less desirable employment arrangements are not completely determined by an individual's relative location in the social opportunity structure.

Employment status and health

Bivariate results

Chi-square statistics revealed a strong association between employment status and poor/fair physical health in data from both the CWHS ($\chi^2 = 34.14$;

Table 2

	Optimal	Economically good	Psychologically good	Barely adequate	Inadequate employment	Unemployed
(a) *Estimated employment status distribution (in percent) across the California population and within specific demographic subgroups*						
Overall	34.3	23.4	14.6	10.0	9.5	8.1
Age						
Less than 35	28.3[a]	18.6[a]	17.5[a]	11.4[a]	14.0[a]	10.2[a]
35–62	40.0	29.6	11.0	7.5	5.7	6.3
62+	50.0	10.5[a]	23.7[a]	13.2	N/a	2.6
Gender						
Men	35.6	25.1	13.1	10.6	8.5	7.2
Women	32.6	21.2	16.7	9.2	10.9	9.2
Race/ethnicity						
White	39.0[b,c]	25.0	13.8	11.8[c]	4.0[b,c,d]	6.3[d]
Black	26.3	30.3	10.5	10.5	13.2	9.2
Asian	33.0	23.0	10.0	9.0	9.0	16.0
Hispanic	22.2	20.5	19.3	6.4	22.8	8.8
Education						
Less than H.S.	13.6	12.7	16.9	9.3	33.9	13.6
H.S. or general equivalency degree	23.2	20.5	16.9	16.1	11.0	12.2
Some college	33.3	24.9	16.2	10.5	7.8	7.2
College graduate	49.2	27.5	11.0	5.6	2.4	4.3
(b) *Estimated employment status distribution (in percent) across the entire population and within specific demographic subgroups*						
Overall	20.3	29.2	14.4	17.1	15.4	4.1
Age						
Less than 35	18.8	27.4	16.5	20.5	12.9	4.0
35–62	22.0	31.5	13.4	15.5	13.8	3.7
62+	10.1	12.2	15.5	17.6	42.6[e]	2.0
Gender						
Men	24.0[f]	34.8[f]	15.2	16.7	6.8[f]	2.6[f]
Women	16.9	24.1	13.6	17.4	23.3	4.6
Race/ethnicity						
non-black	20.3	29.5	13.9	17.3	15.7	3.2[g]
Black	19.4	27.0	17.6	15.5	12.9	7.6
Education						
Less than high school	10.7	17.2	21.0	21.9	22.7	6.4
High school or general equivalency degree	17.5	27.0	14.4	18.4	18.2	4.5
Some college	20.3	29.2	16.0	16.2	15.4	2.9
College graduate	27.6	36.6	10.2	14.5	8.6	2.4
Occupational status						
Bottom quartile	10.1	23.4	16.3	21.5	28.5	n/a
Low quartile	21.1	29.6	17.8	17.6	13.8	n/a
Upper quartile	26.1	31.9	14.6	19.3	8.0	n/a
Top quartile	32.4	40.8	8.9	11.4	6.5	n/a

[a] Significant bivariate difference ($p \leqslant 0.05$) in contrast to respondents aged 35–62.
[b] Significant bivariate difference ($p \leqslant 0.05$) in contrast to Black respondents.
[c] Significant bivariate difference ($p \leqslant 0.05$) in contrast to Hispanic respondents.
[d] Significant bivariate difference ($p \leqslant 0.05$) in contrast to Asian/Pacific Islander respondents.
[e] Significant bivariate difference ($p \leqslant 0.05$) in contrast to younger age groups.
[f] Significant bivariate difference ($p \leqslant 0.05$) in contrast to women.
[g] Significant bivariate difference ($p \leqslant 0.05$) in contrast to Black respondents.
Data from the California Work and health Survey (CWHS), 1998.
Data from the National Survey of Midlife Development in the United States (MIDUS), 1995.
Note: Descriptive statistics are based on weighted data.

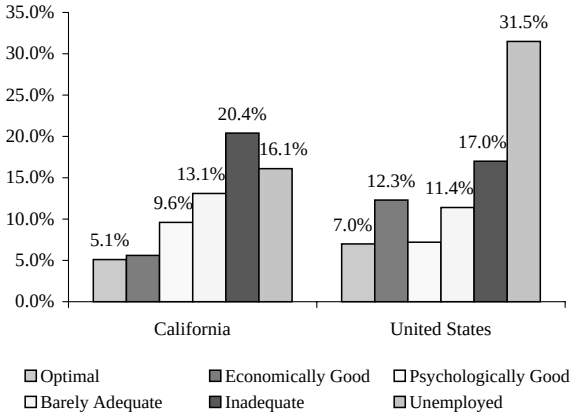

Fig. 1. The prevalence of poor/fair health by employment status in California and the United States.

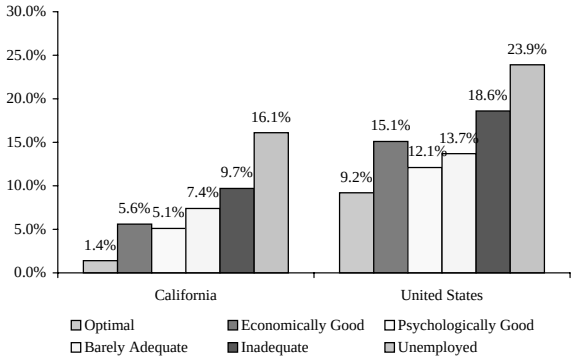

Fig. 2. Prevalence of depression by employment status in California and the United States.

df = 5; $p \leqslant 0.001$) and the MIDUS ($\chi^2 = 60.79$; df = 5; $p \leqslant 0.001$). As is evident in Fig. 1, respondents who were employed in "optimal" jobs, in both the state and national samples, were less likely to report fair or poor physical health in contrast to individuals in "barely adequate" or "inadequate" jobs, as well as those who were unemployed. An inconsistent pattern emerged however when comparing individuals in "optimal" jobs to those in "economically good" and "psychologically good" jobs. In contrast to individuals working in "optimal" jobs, Californians working in "psychologically good" jobs were more likely to report fair/poor health, but individuals working in "economically good" jobs did not differ. In the national sample however, those working in "economically good" jobs had a higher relative risk of reporting fair/poor health in contrast to those in "optimal jobs", while workers in "psychologically good" jobs did not differ.

Similar analyses revealed that being employed in better jobs was associated with less depression ($\chi^2 = 35.52$, df = 5, $p \leqslant 0.001$ in CWHS; $\chi^2 = 24.49$, df = 5, $p \leqslant 0.001$ in MIDUS; see Fig. 2). The estimated risk of depression was lower for individuals in "optimal" jobs in contrast to individuals in every other employment category (individuals in "optimal" jobs did not differ from workers in "psychologically good" jobs in the national data). Self-reported fair/poor health and depression were correlated in each of the studies ($\chi^2 = 32.27$, df = 1, $p \leqslant 0.001$ in CWHS; $\chi^2 = 48.16$, df = 1, $p \leqslant 0.001$ in MIDUS), however the magnitude of the association was small (Mean $r = 0.158$).

Multivariate Analyses

Logistic regression examining the association between employment status and physical health, controlling for age, gender, race/ethnicity, and multiple indicators of socioeconomic status (education, household earnings, and in the analyses of the MIDUS data, net worth as well) yielded a diverse pattern of results in our data (see Table 3). Among Californians, after controlling for the effects of sociodemographic characteristics, only respondents who were unemployed were found to have a greater likelihood of reporting fair/poor health in contrast to those in "optimal jobs". Despite the effect for unemployment, adding all the employment statuses to the model did not significantly reduce the amount of unexplained variance in fair/poor health ($\chi^2 = 6.73$; df = 5). In our national sample however, we find that individuals in "economically good", "barely adequate" (trend level only), and "inadequate" jobs, as well as those who were unemployed were all more likely to report fair/poor health in contrast to individuals working in "optimal jobs", and these variables added significantly to the model ($\chi^2 = 39.49$; df = 5; $p \leqslant 0.001$).

Reinforcing our earlier bivariate results indicating differences in depression by employment status, multivariate logistic regression analyses examining the association between employment status and depression yielded similar findings in our two data sets (see Table 4). After adjusting for the potential confounding effects of age, gender, race/ethnicity, and socioeconomic status, the odds of meeting the requirements for depression in these studies were significantly greater for workers in "economically good", "barely adequate" (CWHS data only), and "inadequate" jobs in contrast to those in optimal jobs. Results from analyses of both data sets also indicated that unemployed respondents were more likely to meet the criteria for depression in contrast to individuals in "optimal" jobs. In both the state and national analyses, adding employment status to the demographic model added significantly to the model ($\chi^2 = 21.35$; df = 5; $p \leqslant 0.001$ and $\chi^2 = 621.90$; df = 5; $p \leqslant 0.001$, respectively).

Table 3
Logistic regression results estimating the association between employment status and poor/fair physical health.

	California Work and Health Survey			National Survey of Midlife Development in the United States		
	B	SE (B)	Odds ratio	B	SE (B)	Odds ratio
Employment status						
Optimal employment	Reference			Reference		
Economically good	0.14	0.38	1.15	0.62***	0.22	1.86
Psychologically good	0.62*	0.39	1.85	0.02	0.29	1.02
Barely adequate	0.63	0.44	1.87	0.45*	0.26	1.57
Inadequate employment	0.36	0.53	1.44	0.59**	0.26	1.80
Unemployed	1.06**	0.45	2.89	1.81****	0.31	6.14
Demographic characteristics						
Age	0.03***	0.01	1.03	0.02***	0.01	1.02
Race/ethnicity (black = 1)	0.80**	0.34	2.23	−0.55*	0.31	0.58
Gender (female = 1)	0.21	0.24	1.23	0.02	0.15	1.02
Less than high school education	0.91**	0.44	2.47	1.35****	0.26	3.84
High school education or general equivalency degree	0.33	0.36	1.40	0.48**	0.21	1.62
Some college	0.01	0.34	1.01	0.56***	0.20	1.74
College graduate	Reference			Reference		
Household earnings[a,b]				−0.28	0.28	0.75
HH earnings <$20,000	0.83	0.55	2.30	n/a	n/a	n/a
$20,000–40,000	0.71	0.47	2.03	n/a	n/a	n/a
$40,000–60,000	0.26	0.50	1.29	n/a	n/a	n/a
$60,000–80,000	−0.001	0.61	1.00	n/a	n/a	n/a
HH earnings > $80,000	Reference			n/a	n/a	n/a
Marital status (married = 1)	−0.22	0.26	0.80	0.13	0.16	1.14
Assets	n/a	n/a	n/a	−0.02***	0.01	0.98
Physical health at age 16	n/a	n/a	n/a	−0.15**	0.07	0.86
Second Log likelihood	528.92			1438.24		
Df	980			2142		

[a] Models were estimated using appropriate flags for missing values in household earnings
[b] Household earnings and assets are continuous measures in the MIDUS data where each unit increase reflects a change in income of $10,000.
*$p \leqslant 0.10$.
**$p \leqslant 0.05$.
***$p \leqslant 0.01$.
****$p \leqslant 0.001$ (two-tailed).
Note: Reported estimates are based on unweighted data (CWHS $n = 1078$; MIDUS $n = 2402$).

Discussion

This study offered an expanded conceptualization of the employment continuum ranging from "optimal" employment to unemployment, and tested its utility by examining the association of different classifications of employment status with physical health and psychological well-being. Descriptive analyses indicated that most adults were adequately employed, however a substantial minority of adults found themselves working in "barely adequate" or "inadequate" jobs, which is consistent with recent reports (Jensen et al., 1999). Additional bivariate analyses indicated a non-random distribution of employment classification based upon a variety of sociodemographic characteristics. For example, in the nationally representative sample of adults, women, respondents with lower levels of education, and older workers (i.e., adults over age 65 who continued working) were more likely to find themselves in "barely adequate" or "inadequate" jobs in contrast to men, better educated individuals, or younger respondents. Similarly people of color in the ethnically diverse California sample were found to be more likely to be "inadequately" employed in contrast to non-Hispanic whites (Kalleberg et al., 2000; Tipps & Gordon, 1985).

Employment status had only a small to medium sized association with different measures of socioeconomic status. Bivariate associations (ranging from $r_s = -0.24$ to $r_s = -0.31$) show that employment status is related

Table 4
Logistic regression results estimating the association between employment status and depression

	California Work and Health Survey			National Survey of Midlife Development in the United States		
	B	SE (B)	Odds ratio	B	SE (B)	Odds ratio
Employment status						
Optimal employment	Reference			Reference		
Economically good	1.41***	0.53	4.11	0.42**	0.19	1.53
Psychologically good	1.10*	0.62	3.16	0.22	0.24	1.24
Barely adequate	1.40**	0.65	4.03	0.21	0.23	1.24
Inadequate employment	1.53**	0.72	4.61	0.72***	0.23	2.06
Unemployed	2.47****	0.59	11.87	1.22****	0.30	3.37
Demographic characteristics						
Age	0.01	0.01	1.01	−0.02***	0.01	0.98
Race/ethnicity (black = 1)	−0.21	0.49	0.81	−0.20	0.25	0.82
Gender (female = 1)	0.34	0.29	1.40	0.38***	0.13	1.46
Less than high school education	0.51	0.61	1.66	0.47*	0.25	1.59
High school education or general equivalency degree	0.62	0.45	1.86	−0.24	0.18	0.79
Some college	0.57	0.41	1.76	0.08	0.16	1.08
College graduate	Reference			Reference		
Household earnings[a,b]				0.24	0.23	1.27
HH earnings <$20,000	0.12	0.60	1.12	n/a	n/a	n/a
$20,000–40,000	−0.10	0.51	0.91	n/a	n/a	n/a
$40,000–60,000	−0.83	0.62	0.44	n/a	n/a	n/a
$60,000–80,000	−0.09	0.58	0.91	n/a	n/a	n/a
HH earnings > $80,000	Reference			n/a	N/a	n/a
Marital status (married = 1)	−1.04***	0.36	0.35	−0.58****	0.14	0.56
Assets	n/a	n/a	n/a	−0.02***	0.01	0.98
Mental health at age 16	n/a	n/a	n/a	−0.29****	0.06	0.75
Second Log likelihood	374.90			1657.28		
Df	982			2140		

[a] Models were estimated using appropriate flags for missing values in household earnings.
[b] Household earnings and assets are continuous measures in the MIDUS data where each unit increase reflects a change in income of $10,000.
*$p \leqslant 0.10$.
**$p \leqslant 0.05$.
***$p \leqslant 0.01$.
****$p \leqslant 0.001$ (two-tailed).
Note: Reported estimates are based on unweighted data (CWHS $n = 1078$; MIDUS $n = 2402$).

to education and occupational status/prestige (two conventional indicators of SES), but the empirical overlap between employment status and SES is small. Additionally analyses found that less than optimal employment arrangements were independently associated with poorer physical health and more depression, even after adjusting for age, race/ethnicity, gender, and multiple measures of SES.

In considering the overall pattern of results from these multivariate analyses, it is interesting to note the apparent importance of the psychological features of their job to respondents' physical health and well-being (Karasek & Theorell, 1990; Warr, 1994). Specifically, we found fairly consistent differences in physical and mental health between respondents in "optimal" and "economically good" jobs, while individuals in "psychologically good" jobs were not consistently different from those in "optimal" jobs (although trend level associations did emerge in the CWHS data). During periods of relative economic prosperity, such as those of the later half of the 1990s when these data were collected, psychological aspects of employment arrangements appear to be more important to employee health and well-being than economic considerations, provided an adequate economic threshold has been met. Although this pattern could reflect common-method variance or selection bias, these results are consistent with recent reports indicating that changes in job characteristics (e.g., decision latitude and psychological demands) are principal explanations for increases in population

depression during economic recession (Tausig & Fenwick, 1999).

It is also important to restate that we found the effects of employment status on health in both data sets after adjusting for social resources. Education, income, and accumulated wealth may be viewed as the primary contributions of employment to health. These results reinforce two key points. First employment status is distinguishable from other aspects of socioeconomic status. Second, our results reinforce Jahoda's argument (1982) that employment is more than a way to earn a living and support a lifestyle; the quality of our employment experiences are central to who we are and in turn influences many aspects of our lives.

Although the results from these studies are compelling, the qualifications and limitations of these studies provide direction for future research. First, it is important to acknowledge the arbitrariness of our operationalization of the employment continuum both as a function of the items available in the existing surveys (chosen by the creators of the surveys) and as a function of the item grouping and cut-points (chosen by us). It is constructive to note that this arbitrariness may lead to underreports of "bad jobs" among some groups (e.g., overall household earnings may mask "poverty level wage" jobs, particularly among women). Although the operationalization of the employment continuum construct was somewhat arbitrary, the conceptual underpinnings of the construct have been successfully applied in studies around the world. Indeed, the Labor Utilization Framework, from which we co-opt the concepts of adequate employment and underemployment, was developed to better capture the employment experiences of workers in developing countries (see Jensen & Slack, in press), and decision latitude and psychological demands are widely used concepts to explain the health effects of jobs (Theorell, 1999). Unfortunately, other aspects of employment that may underlie worker well-being such as variety of tasks, open communication in the work environment, physical security, and others outlined by Warr (1994) were not available in these data. Moreover, the generally low overall response rates in both the CWHS and the MIDUS may contribute to inflated standard errors and inefficient estimates of association, so the general pattern of results should be considered rather than specific individual findings. Thus, the current operationalization provides a basic framework and preliminary analyses that can be elaborated and refined in future research using enhanced measurement and survey techniques.

Notwithstanding these limitations, the results of these studies have important research and policy implications. One research implication is the possibility of a more comprehensive treatment of employment status taking into account the broad array of statuses rather than just the conventional employed versus unemployed dichotomy. For example, is there a clear monotonic relationship between more desirable employment statuses and good health, or is there a threshold beyond which better employment arrangements do not lead to improvements in health? Of course, this would first require the development of a more reliable measurement strategy that adequately captures the major aspects of employment that people use to assess the quality of their job.

There are also policy implications surrounding the measurement of employment and the use of health outcomes to inform the debate about employment policy. If employment statistics are gross indicators of a nation's health, for example, then unemployment rates underestimate the health problems of a population by ignoring the health-implications of "bad jobs". Moreover, policies that promote job growth without giving attention to the overall adequacy of the jobs may undermine health and well-being. Similarly, downward transitions from optimal jobs to barely adequate jobs might have comparable affects on health and well-being as transitions from employment to unemployment. Results from our study, as well as previous studies, suggest that a broader range of employment classifications need to be considered when shaping employment-related policies.

Employment plays an important role in the physical, psychological and social well-being of most adults. Our findings, despite notable qualifications and limitations, suggest that the use of a broader continuum of employment can advise employment-related policy, as well as inform the complex employment-well-being relationship.

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