Journal of Applied Psychology
2005, Vol. 90, No. 1, 53–76

0021-9010/05/$12.00 DOI: 10.1037/0021-9010.90.1.53

Psychological and Physical Well-Being During Unemployment: A Meta-Analytic Study

Frances M. McKee-Ryan
Oregon State University

Zhaoli Song and Connie R. Wanberg
University of Minnesota

Angelo J. Kinicki
Arizona State University

The authors used theoretical models to organize the diverse unemployment literature, and meta-analytic techniques were used to examine the impact of unemployment on worker well-being across 104 empirical studies with 437 effect sizes. Unemployed individuals had lower psychological and physical well-being than did their employed counterparts. Unemployment duration and sample type (school leaver vs. mature unemployed) moderated the relationship between mental health and unemployment, but the current unemployment rate and the amount of unemployment benefits did not. Within unemployed samples, work-role centrality, coping resources (personal, social, financial, and time structure), cognitive appraisals, and coping strategies displayed stronger relationships with mental health than did human capital or demographic variables. The authors identify gaps in the literature and propose directions for future unemployment research.

Job loss is a life event in which paid employment is involuntarily taken away from an individual. Unfortunately, the frequency of job loss continued to occur during the robust economy of the 1990s and has increased since September 11, 2001. For example, the unemployment rate in the United States jumped from 4.0% in 2000 to 6.0% in 2003 (U.S. Bureau of Labor Statistics, 2003b), and the average duration of unemployment went from less than 13 weeks to over 19 weeks (U.S. Bureau of Labor Statistics, 2003c) during the same period.[1] During the first 9 months of 2003, there were 5,206 extended mass layoff events in the United States that led to over a million separations (U.S. Bureau of Labor Statistics, 2003a). According to the U.S. Department of Labor Current Population Study conducted in January 2002, 4.0 million employees lost long-tenured jobs between January 1999 and December 2001, and nearly 30% of the reemployed displaced workers took a pay cut of at least 20% in their new jobs (U.S. Bureau of Labor Statistics, 2002). These trends highlight the importance of a close examination of the unemployment experience.

A large number of narrative reviews have been written about the experience of job loss from the perspective of those who have lost a job (e.g., Hanisch, 1999; Latack, Kinicki, & Prussia, 1995; Leana & Feldman, 1994; Platt, 1984; Wanberg, Kammeyer-Mueller, & Shi, 2001; Winefield, 1995) and portray job loss as a highly stressful experience that provokes reactions among those who lose jobs such as anxiety, depression, and lowered physical health. Yet, quantitative synthesis of the literature concerning the relationship between unemployment and employee well-being has been extremely limited. A comprehensive meta-analysis is needed within this field of research because the vast number of individual studies that exist are subject to the effects of sampling error and artifacts that can produce erroneous conclusions (Guzzo, Jackson, & Katzell, 1987). This problem is exacerbated when researchers rely on narrative reviews of a research literature.

The objectives of this study are to examine, through meta-analytic methods, four central and important questions stemming from the literature on job loss.

1. What is the average impact of unemployment on individual psychological and physical well-being?
2. How do individual levels of psychological and physical well-being during unemployment relate to the probability of reemployment?
3. What are the correlates of psychological and physical well-being during unemployment?

Frances M. McKee-Ryan, Department of Management, Marketing, and International Business, Oregon State University; Zhaoli Song and Connie R. Wanberg, Department of Human Resources and Industrial Relations, University of Minnesota; Angelo J. Kinicki, Department of Management, Arizona State University.

Zhaoli Song is now at the Department of Management and Organization, National University of Singapore, Singapore.

This research was supported in part by a grant to Angelo J. Kinicki from the Dean's Award for Excellence Summer Grant Program funded by the Dean's Council of 100, the Economic Club of Phoenix, and the Alumni of the W.P. Carey School of Business at Arizona State University. Portions of this research were presented at the Academy of Management Meeting, Seattle, Washington, August 2003.

Correspondence concerning this article should be addressed to Frances M. McKee-Ryan, College of Business, Oregon State University, 200 Bexell Hall, Corvallis, OR 97331–2603. E-mail: fran@bus.oregonstate.edu

[1] Statistic is through November 2003, the latest data available.

4. Are study characteristics such as the current unemployment rate, level of unemployment protection, average duration of unemployment in the sample, or the type of sample related to the association found between well-being and unemployment?

To complement our meta-analytic effort, we provide predictor and criterion taxonomies to organize the results. Finally, we compare our findings with past research to identify gaps in the literature and to propose directions for future research.

Unemployment and Psychological and Physical Well-Being

Criterion Taxonomy

Researchers have examined a wide variety of psychological (e.g., hostility, depression, frustration, anger, guilt, worry, anxiety, psychiatric disorders, suicide, and changes in emotional state or in life or career satisfaction) and physical (e.g., perceived health and cardiovascular, immunological, gastrointestinal, biochemical, and physical disease) health variables in their examinations of the effects of job loss (DeFrank & Ivancevich, 1986; Hanisch, 1999). The wealth of constructs examined in past research necessitates a discussion of criterion taxonomies that can be used to summarize research using a variety of psychological and physical measures.

To impose order on the vast array of scales and measures of psychological outcomes used in the unemployment literature, we relied on Diener, Suh, Lucas, and Smith's (1999) seminal discussion of the components of subjective well-being. Diener et al. conceptualized psychological or subjective well-being as a broad construct, encompassing four specific and distinct components including (a) pleasant affect or positive well-being (e.g., joy, elation, happiness, mental health), (b) unpleasant affect or psychological distress (e.g., guilt, shame, sadness, anxiety, worry, anger, stress, depression), (c) life satisfaction (a global evaluation of one's life), and (d) domain or situation satisfaction (e.g., work, family, leisure, health, finances, self).

Although measures of pleasant affect (or positive well-being) and negative affect (or psychological distress) are highly correlated, several studies support the two dimensions as distinct (Lucas, Diener, & Suh, 1996; Veit & Ware, 1983). Complicating the distinction between positive and negative aspects of well-being, however, is the fact that a large number of measures contain aspects of both (Diener et al., 1999). For example, a scale widely used to assess psychological well-being in the unemployment literature, the General Health Questionnaire (GHQ–12; Goldberg, 1972), contains items that tap both positive and negative affect (such as feeling happy and feeling under strain, respectively). Because of the small number of studies across different psychological well-being correlates and the use of measures that do not cleanly distinguish between positive and negative affect, we collapsed across positive and negative well-being measures to portray a broader, higher order affective dimension of well-being. We labeled this dimension *mental health*. Life satisfaction and domain satisfaction were analyzed separately, where measured.

Physical well-being measures were categorized as being subjective (involving self-reports of physical symptoms) or objective (involving measurements of more objective medical indices) in nature. Subjective physical health assessments typically include inquiries about the extent that one has either specific (e.g., headaches, backaches) or general (e.g., number of days not feeling well) health complaints (e.g., Schwarzer, Jerusalem, & Hahn, 1994) or diminished physical functioning (e.g., Gallo, Bradley, Siegel, & Kasl, 2000). Such subjective health assessments are important, as some symptoms cannot be observed by others and can only be understood by asking the individual (Sherbourne, Allen, Kamberg, & Wells, 1992). Objective physical health assessments include assessments of indices such as blood pressure (e.g., Bailey, 1984), salivary cortisol (Grossi, Ahs, & Lundberg, 1998), or serum uric acid (Cobb, 1974). Although assessments of subjective physical health are more common in the unemployment literature, we differentiate when possible between subjective and objective indices in our meta-analysis.

Past Research

Research conducted at both aggregate and individual levels has been suggestive that unemployment, on the average, has a negative impact on individuals' psychological and physical well-being. The aggregate-level studies have portrayed a positive relationship between unemployment rates and indices such as mortality, heart disease, mental health, heavy drinking, and the use of mental health services (Jin, Shah, & Svoboda, 1995). These studies have been criticized on a number of counts, including their inability to allow generalization to an individual level. For example, if a positive relationship between suicides and unemployment rate is observed, it is impossible to determine if it is those who are unemployed who are committing suicide (for an excellent discussion, see Dooley & Catalano, 1988). Individual-level studies, the focus of our study, are nevertheless similarly suggestive of the relationship between unemployment and reduced well-being. Three types of individual-level studies have been supportive of the negative impact of unemployment (Wanberg et al., 2001). First, cross-sectional studies have shown that unemployed groups tend to have lower levels of psychological and physical well-being than employed groups. Second, longitudinal studies have followed individuals over time from unemployment back into employment, showing increases in psychological and physical well-being among those who become reemployed. Last, studies have also followed individuals over time from employment into unemployment (showing decreases in psychological and physical well-being among displaced workers).

Cross-sectional comparisons of unemployed and employed individuals provide highly useful information regarding the association between unemployment and individual well-being. We cannot, however, make causal inferences from this type of data. A researcher, for example, who finds an unemployed group with lower mental health than an employed comparison group cannot conclude that the lower mental health is a consequence of the unemployment. Instead, it may be the case that individuals with lower mental health are more likely to lose their jobs or that individuals with higher mental health are more likely to find new jobs (e.g., Mastekaasa, 1996; Warr, Jackson, & Banks, 1988). This concern has been termed "selection bias" (Kessler, Turner, & House, 1987) or just "selection" (Claussen, Bjørndal, & Hjort, 1993) in the literature. Longitudinal studies have the advantage of following and comparing the same individuals over time. One

disadvantage with these studies relates to a different type of selection effect, subject mortality (Cook & Campbell, 1976). That is, it is possible that study dropouts are individuals who do not experience mental health declines during unemployment (Graetz, 1993). It also is plausible that individuals who stay in longitudinal studies are those experiencing more anxiety and fear and that they complete surveys because it gives their pain a voice. Finally, it is possible that longitudinal studies are coincidentally conducted over times where there are natural, seasonal changes in well-being (e.g., improvements in well-being could naturally occur as individuals move from winter months into spring months; e.g., see Cook & Campbell, 1979). Thus, the findings from most studies of job loss and unemployment must be tempered by acknowledging the threats to internal and external validity in their research designs (cf. Cook & Campbell, 1976). Given these potential weaknesses, it is important to collect evidence from a variety of research approaches to uncover patterns and trends regarding the relationship between mental health and unemployment.

A preliminary meta-analysis based on nine individual-level longitudinal studies conducted between 1986 and 1996 provided initial information about the potential effect size of unemployment on mental health (Murphy & Athanasou, 1999). Specifically, a weighted effect size of .36 ($k = 5$) was calculated for mental health changes associated with moves from employment to unemployment, representing a decrease in mental health. A weighted effect size of .54 ($k = 7$) was calculated for moves from unemployment into employment, demonstrating an increase in mental health. Our meta-analysis draws on a much more extensive literature base and has a broader focus than that study. For example, to allow examination of the relationship between unemployment and well-being, we include additional longitudinal studies as well as a wealth of available cross-sectional comparisons between unemployed and employed individuals. We also investigate correlates of mental health during unemployment as well as the relationship between well-being during unemployment and the probability of reemployment. Our outcome measures across these analyses include, where available, not only mental health but a broader domain of well-being outcomes including life satisfaction, domain satisfaction, and physical health. Finally, unlike Murphy and Athanasou (1999) who did not correct for measurement error (i.e., unreliability), our effect size calculations were corrected for unreliability in both the predictors and criteria.

Warr (1987) and Jahoda (1979) provided theoretical explanations for why unemployment may negatively impact individuals' well-being. Warr (1987) proposed that unemployment leads to negative psychological and physical outcomes because unemployed individuals do not experience nine positive benefits associated with employment: opportunity for control, opportunity for skill use, externally generated goals, variety, environmental clarity, availability of money, physical security, opportunity for interpersonal contact, and valued social position. Jahoda (1982) similarly concluded that job loss spawns negative outcomes because unemployed individuals are less likely to experience a host of positive manifest and latent consequences associated with working. She suggested that employment imposes a time structure on the day, allows individuals to socialize with others, provides people with a sense of purpose, allows individuals increased status, and encourages activity. Research partially supported the above propositions (Kinicki, Prussia, & McKee-Ryan, 2000; Wanberg, 1995; Winefield, Winefield, Tiggemann, & Goldney, 1991). On the basis of the discussion above, we expect to find lower levels of well-being among unemployed individuals in comparison with employed individuals and strive to document the effect size of this relationship in (a) cross-sectional comparisons of unemployed and employed individuals, (b) longitudinal studies that follow individuals from unemployment back into employment, and (c) longitudinal studies that follow individuals from employment into unemployment.

Psychological and Physical Well-Being and Reemployment

Many studies have sought to examine the effects of unemployment on individuals' psychological well-being, with fewer focused on physical well-being. A small number of studies have examined the relationship between displaced workers' psychological and physical well-being and their reemployment probability. A narrative assessment of available studies yields mixed findings. Claussen et al. (1993) found that among a random sample of registered unemployed workers in Norway, those who performed normally on mental distress tests and medical diagnoses had an increased chance of reemployment. These results were supported by a recent study conducted in the Netherlands (Taris, 2002), in which higher mental health was related to reemployment probability among 98 unemployed adults. Contrasting findings, however, were reported by Warr and Jackson (1985); Kessler, Turner, and House (1989); and Schaufeli and van Yperen (1993). Although empirical results are mixed, theoretical analysis suggests a positive relationship between well-being during unemployment and reemployment probability. Taris (2002), for example, explained the selection to reemployment by using life-span developmental theory, suggesting that poor mental health may deteriorate the capacity of unemployed workers to actively shape their environment and may reduce their job search intention and behavior, thus lowering their reemployment probability.

The psychological impact of unemployment may also manifest itself in physiological outcomes. For example, Grossi et al. (1998) examined psychological variables and cortisol levels in response to a stressful activity among a group of long-term unemployed persons. They identified a group of "exhausted" employees who had high levels of depression, irritability, and anxiety and low mastery and who exhibited low reactivity to stressors in terms of cortisol excretions. Moreover, unemployed individuals report greater physical illness and health complaints (e.g., Schwarzer et al., 1994; Turner, 1995), and they are more likely to engage in high-risk health behaviors such as using alcohol (e.g., Catalano, Dooley, Novaco, Wilson, & Hough, 1993; Claussen, 1999; Rasky, Stronegger, & Freidl, 1996; Viinamäki, Koskela, & Niskanen, 1993). We thus make the argument that individuals with poor physical health may encounter constraints that cause them to have difficulties searching for and obtaining employment. In our meta-analysis, we compute and report the average relationship between psychological and physical well-being and reemployment probability across studies completed to date.

Correlates of Well-Being During Unemployment

Leana and Feldman (1994) noted, "While virtually all terminated employees suffer some negative consequences from job loss,

there is also substantial variance among the unemployed in the degree to which they respond negatively to a termination" (p. 279). Indeed, our literature search uncovered over 100 different variables that were correlated with various indicators of psychological and physical well-being following job loss. Given both the diversity and the number of predictors of psychological and physical well-being associated with job displacement, it was necessary to consolidate the database by using a theoretical taxonomy to create broad correlate categories (see Kanfer, Wanberg, & Kantrowitz, 2001, and Kinicki, McKee-Ryan, Schriesheim, & Carson, 2002, for similar approaches).

We derived our taxonomy from McKee-Ryan and Kinicki's (2002) life-facet model of coping with job loss. These researchers sought to explain the variability and process of reactions to job loss by means of a coping–stress framework. From their model, we glean five important correlate, or predictor, categories that have been sufficiently studied to warrant meta-analytic review and discussion: (a) work-role centrality, (b) coping resources, (c) cognitive appraisal, (d) coping strategies, and (e) human capital and demographics (see Figure 1). Whereas their model—as well as general theories of stress and coping—suggests that appraisal and coping mediate the effect of work-role centrality, coping resources, and human capital and demographics on individual well-being, we meta-analytically examine the direct relationship between each variable set and well-being because of the limited number of studies that include measures of cognitive appraisal or coping strategies. In the following sections, we describe each of the correlate categories depicted in Figure 1.

Work-Role Centrality

Work-role centrality—also referred to as *work involvement*, *employment commitment*, *employment value*, and *career commitment*—indicates the general importance of the work role to an individual's sense of self. The notion of work-role centrality is conceptually distinct from the constructs of job involvement or organizational commitment, which denote an individual's orientation toward a specific job or organization rather than work in general (S. P. Brown, 1996; Kanungo, 1982). Work-role centrality may stem from Protestant-work-ethic socialization or simply from a belief that work is central to one's life and satisfaction (Kanungo, 1982). Because individuals with high work-role centrality find the work role as providing meaning and fulfillment, the absence of work for these individuals has been proposed by many authors to lead to lower psychological and physical well-being (e.g., Ashforth, 2001; P. R. Jackson, Stafford, Banks, & Warr, 1983; Kinicki, 1989).

Coping Resources

Coping resources consist of individual characteristics (internal) and environmental objects or conditions (external) a person can

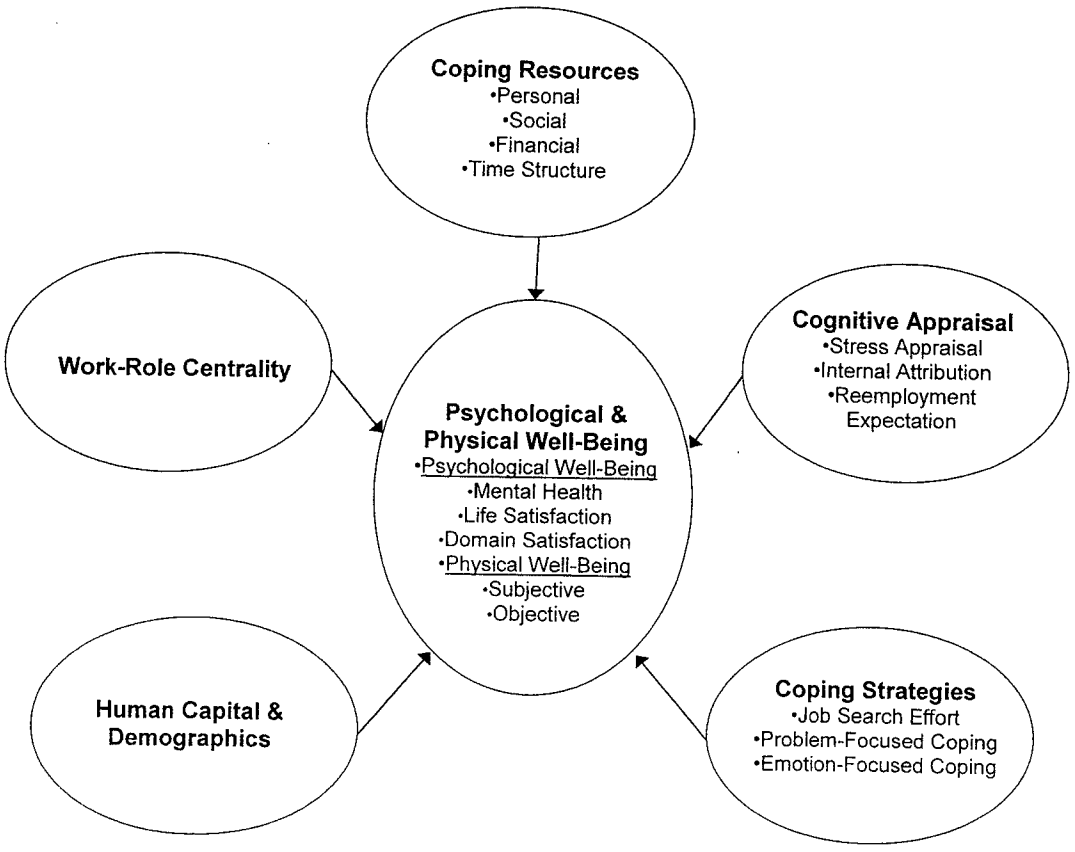

Figure 1. Contributing elements to psychological and physical well-being following job displacement.

draw on to cope with involuntary job loss (Latack et al., 1995; Lazarus & Folkman, 1984). They represent a repertoire of aids a person can use in a stressful situation. As such, coping resources are expected to reduce the negative effects of involuntary job loss. McKee-Ryan and Kinicki (2002) identified three types of coping resources (personal, social, and financial) that are particularly relevant for coping with job displacement. We add to this a fourth resource—time structure—that has been theoretically and empirically shown (e.g., see Hepworth, 1980; Wanberg, Griffiths, & Gavin, 1997) as relevant to well-being during unemployment.

Personal Resources

Personal resources are "internal resources upon which an individual may draw to cope" with stressful life events (McKee-Ryan & Kinicki, 2002, p. 18). Consistent with McKee-Ryan and Kinicki (2002), our review of the literature revealed that the personal resources that have been theorized and studied in relation to psychological and physical well-being during unemployment were those that related to individuals' self-perceptions of worth, perceived control over life events, and various affective dispositions—all components of core self-evaluations (Judge, Locke, & Durham, 1997). Core self-evaluations refer to a highly correlated constellation of personality traits pertinent to individuals' fundamental evaluations of themselves in comparison to others (Judge et al., 1997). The specific personality traits that have been conceptualized as components of core self-evaluation include self-esteem, locus of control, generalized self-efficacy, and emotional stability (represented by low neuroticism or negative affectivity), although positive affectivity has also loaded on a common core self-evaluation factor (Judge, Locke, Durham, & Kluger, 1998). Core self-evaluation components, because they are fundamental to individuals' self-appraisals of their worth and capabilities, have been conceptualized and supported as important to individuals' psychological and physical well-being. For example, individuals with higher self-esteem, higher perceived control, and higher levels of optimism generally have higher levels of mental health and cope more effectively with a variety of stressful life events (e.g., Armstrong-Stassen, 1994; Aspinwall & Taylor, 1992). Because the components of core self-evaluation have been shown to be highly correlated and representative of a general core self-evaluation factor (Erez & Judge, 2001; Judge et al., 1998), and owing to the need to collapse across individual core self-evaluation constructs that have been studied in isolation as correlates of well-being during unemployment, we collapsed constructs that are conceptually relevant to core self-evaluation into an overarching core self-evaluation category.

Social Resources

Social resources are an external coping resource derived through social interactions and social support. Lazarus and Folkman (1984) concluded that social resources contribute to psychological and physical well-being in two different ways. First, social-network embeddedness helps people feel good about themselves and their lives, which in turn enhances displaced workers' propensity to maintain a positive outlook during unemployment. Second, social resources serve to buffer stress and its destructive somatic consequences. Two different meta-analyses supported these propositions. Pinquart and Sörensen (2000) found that the quality of social contacts was positively related to subjective well-being, and Viswesvaran, Sanchez, and Fisher's (1999) results revealed that social support mitigated the perceptions of stressors and the reported strains experienced at work. Kinicki et al.'s (2000) findings further showed that displaced workers' social resources were depleted during periods of unemployment and were replenished after becoming satisfactorily reemployed. This finding suggests that length of unemployment may moderate the relationship between social resources and psychological and physical well-being.

Social undermining (otherwise known as *negative social support* or *social hindrance*) has also been examined as a negative social resource that has an impact independent of the absence of social support (Vinokur, Price, & Caplan, 1996; Vinokur & van Ryn, 1993). Vinokur and van Ryn (1993) conceptualized social undermining as involving behaviors toward an individual that involve anger, dislike, or criticism or that hinder the individual's attainment of desired goals. Social undermining has been negatively linked to well-being both within (Vinokur et al., 1996; Vinokur & van Ryn, 1993) and outside (Abbey, Abramis, & Caplan, 1985) of the job-loss domain.

Financial Resources

Financial resources refer to the extent to which an individual has access to adequate household income, cash reserves or savings, liquid assets, or severance pay following displacement. Jones (1991–1992) suggested that "availability of income may be the most important determinant of the expression of psychological and health symptoms" (p. 50) following job loss. This may be the case because possessing financial resources improves access to other important resources, such as social and leisure activities, food, housing, and general physical security (Hobfoll, Freedy, Green, & Solomon, 1996; Ullah, 1990).

A construct related to financial resources, but yet distinguishable, is *perceived financial strain*. Perceived financial strain, sometimes labeled *perceived financial hardship*, has been examined by asking respondents to indicate how worried they are about their financial situation or how difficult it is to meet expenses (e.g., see Ullah, 1990; Vinokur & van Ryn, 1993). Perceived financial strain was moderately correlated with objective financial resources (e.g., Vinokur et al., 1996, reported a correlation of −.39 between the two types of measures). This may occur because individuals with the same level of financial resources can vary in terms of either their financial obligations or their appraisal of the situation.

As might be expected given the positive relationship between financial resources and well-being, research has portrayed a negative relationship between perceived financial strain and well-being during unemployment (e.g., Creed & Macintyre, 2001; Feather, 1989; Vinokur & Schul, 2002). However, studies that included assessments of both types of financial measures generally found that perceived-financial-strain measures were more highly correlated with well-being than objective measures of financial resources (Ullah, 1990). Two individuals may have the same level of objective financial resources but may have varying levels of financial obligations. In our meta-analysis, we expect measures of perceived financial strain to be more strongly related to well-being than are measures of financial resources.

Time Structure

An individual's level of time structure is another coping resource that has been examined in relation to psychological and physical health during unemployment. Some unemployed individuals, for example, are able to organize their time, keep routines, feel their time has a sense of purpose, avoid excessive contemplation of the past, and persist at their activities while others are not (Feather & Bond, 1994). Higher time-structure levels are influenced both by the individual (e.g., through one's characteristic approach toward time, routine, and purposeful activity) and by his or her situation (e.g., through obligations such as child care or other activities that impute purpose or structure into the day). We expect to find a positive relationship between time structure and well-being based on Warr's (1987) vitamin model and Jahoda's (1982) deprivation theory of employment. These authors proposed that the daily routines and sense of purpose associated with working provide positive manifest and latent consequences and that positive health consequences should occur when unemployed individuals' lives approximate the employment experience with a scheduled routine full of purposeful activity.

Cognitive Appraisal

Individuals vary in how they interpret job loss (Warr et al., 1988), and cognitive appraisal (i.e., an individual's affective interpretation of being displaced) captures this variation. Cognitive appraisals evaluate environmental demands in terms of their relevance to an individual's well-being and are categorized as harm/loss, threat, or challenge (Lazarus & Folkman, 1984). Stress appraisals signify negative evaluations and are negatively related to psychological and physical well-being. Further, general models of stress and coping (Lazarus & Folkman, 1984) and specific models of coping with job loss (Latack et al., 1995; McKee-Ryan & Kinicki, 2002) are based on the notion that appraisals partially mediate relationships between work-role centrality, coping resources, and human capital and psychological and physical well-being.

Self-attributions about the responsibility held for one's job loss as well as an individual's expectations for reemployment also represent forms of cognitive appraisal that are expected to be relevant to well-being during unemployment. A longitudinal study by Prussia, Kinicki, and Bracker (1993), for example, showed that internal attributions for job loss were negatively associated with affective consequences (a latent construct indicated by life satisfaction and self-esteem), expectations about becoming reemployed, and reemployment. Miller and Hoppe's (1994) results similarly revealed that variability in psychological consequences was predicted by displaced workers' attributions for being terminated. Finally, Wanberg (1997) found that lower levels of situational control (expectations for reemployment) were related to lower levels of mental health among a sample of unemployed individuals.

Coping Strategies

Coping strategies are defined as cognitive and behavioral efforts to manage the internal and external demands associated with person–situation transactions that tax or exceed a person's resources (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Occurring after the cognitive appraisal process, coping is typically classified into two general categories: problem/control-focused coping and emotion/symptom-focused coping (Latack & Havlovic, 1992). Problem/control-focused coping attempts to resolve the "root" cause of a stressful situation, whereas emotion/symptom-focused coping is aimed at managing the emotional response to a stressor (Lazarus & Folkman, 1984).

One form of problem/control-focused coping during job loss—active job search—is particularly critical for unemployed individuals who wish to obtain a job. Meta-analytic results show that active job search is an important predictor of reemployment (Kanfer et al., 2001). At first blush, it might be assumed that job-seeking activity is associated with increased psychological health during unemployment because job-seekers feel as if they are doing something proactive to become reemployed. Yet, research suggests higher job-seeking activity among laid off individuals is instead associated with decreased psychological health (e.g., see Wanberg, 1997). Specifically, job-seeking is often a discouraging process, replete with rejections and uncertainty. Warr et al. (1988) noted that job-seeking has a particularly negative impact on psychological health for unemployed individuals who continue to look for work without success. Those who engage a proactive job search process may also feel pressure to accept any job they are offered and may settle for a low-quality job (cf. Kinicki et al., 2000). On the basis of the preceding discussion, we expect a negative relationship between job search and well-being.

Other forms of coping include problem/control-oriented strategies, such as working on finances, reviewing job skills and qualifications, relocating, and enrolling in training programs, and emotion/symptom-related strategies, such as seeking social support or reminding oneself that job loss is not the end of the world (e.g., Kinicki & Latack, 1990; Leana & Feldman, 1990, 1992). These coping strategies have been argued to help reduce stress during unemployment. Recent research, however, has noted that the relationship between coping strategies and well-being is complex and reciprocal. For example, an individual's reduced well-being may increase a coping response. Conversely, a positive relationship may be found because the person's coping behavior improves well-being over time (cf. Cooper, Dewe, & O'Driscoll, 2001). Put another way, lower well-being may be argued to either stimulate coping or to stall coping in the case of an individual impaired enough to be unable to mobilize their coping. Moreover, the relationship may depend on an individual's coping goal (Latack et al., 1995; Prussia, Fugate, & Kinicki, 2001). All told, however, we draw on Lazarus and Folkman's (1984) original notion that coping improves well-being, and we expect that the coping strategies will be positively related to well-being.

Human Capital and Demographics

Human capital is the productive potential of an individual's knowledge and actions (Bartlett & Ghosal, 2002). Dimensions of human capital (e.g., education, ability, occupational status) have been examined in relation to psychological and physical well-being following job loss, most often as control variables. The reasoning behind their inclusion in job-loss studies is that human capital is highly relevant to individuals' chances of reemployment (Kanfer et al., 2001) and their cognitive appraisals of job loss. For

example, individuals with higher education may have more positive expectations about their chances of finding a satisfactory job, thus easing their anxiety during unemployment (e.g., Price & Fang, 2002).

Research has included a number of additional demographic variables in job-loss research, including marital status, number of dependents, gender, race, and length of unemployment at the time of the study. These variables are included variously because of their theoretical relevance to individuals' coping strategies, well-being, and probability of reemployment or to other outcomes or predictors that have been included in job-loss studies. For example, marital status and number of dependents have been included as control variables because they are relevant to unemployed individuals' financial situation and support structure and because they help parse out the explanatory effects of other variables (e.g., see Vinokur & Schul, 2002; Wanberg, Carmichael, & Downey, 1999), with the thought being that married individuals experience higher levels of well-being and that individuals with more dependents experience lower well-being. Gender also was used as a variable of interest on the basis of (a) the premise that women rely on different types of coping behaviors (e.g., may use more symptom-focused coping) than men or (b) the possibility that women experience job loss as a less serious blow to their central identity than men (Leana & Feldman, 1991). Race has been included as a control variable primarily because of higher unemployment rates, lower average skill and education levels, and possible discrimination issues among some minority groups (e.g., see D. R. Brown & Gary, 1985; Elvira & Zatzick, 2002; Moss & Tilly, 2001). Finally, length of unemployment has been examined to assess the extent to which well-being is associated with how long individuals have been without their job. Conceivably, duration of unemployment is negatively related to mental health because of a cumulative stress factor (P. R. Jackson & Warr, 1984) or because of anxiety stemming from the limited duration of unemployment benefits. These demographic variables are often relevant to well-being during job loss because of their association with other variables.

There are conflicting theoretical propositions regarding the relationship between age and well-being. For example, older individuals who desire to find employment may face real or perceived job discrimination or possess outdated skills. Furthermore, while early retirement may be a possible option for such individuals, a retirement decision is not an easy one and involves its own transition (Hanisch, 1999). Older individuals also are at higher risk for other negative life events that may lower their mental health, such as poor physical health or deaths of friends (e.g., Pinquart, 2001). In contrast to these arguments, Kunzmann, Little, and Smith (2000) suggested that older individuals are better able to accept disappointment and to maximize their positive affect than younger individuals. They proposed that studies examining age as a correlate of psychological well-being must recognize that older individuals' life experiences vary and that it makes sense to attend to their situations rather than their age. Pinquart (2001) further noted that older individuals experience lower levels of objective physical health without always reporting lower levels of subjective physical health, owing to health comparisons with their peers.

Consistent with these conflicting theoretical expectations, empirical findings between age and mental health among unemployed workers are scattered. The relationship was found to be nonsignificant (e.g., Baik, Hosseini, & Priesmeyer, 1989; Creed, 1999; Creed, Muller, & Machin, 2001; Hepworth, 1980; Ullah, 1990; Vuori, Silvonen, Vinokur, & Price, 2002; Wanberg, 1997; Wiener, Oei, & Creed, 1999), negative (e.g., Kemp & Mercer, 1983; Reynolds & Gilbert, 1991; Wanberg et al., 1999), and positive (e.g., P. R. Jackson & Warr, 1984; Macky, 1984). The relationship between age and physical health has rarely been examined in the unemployment context (for an exception, see P. R. Jackson & Warr, 1984).

Potential Moderators

On the basis of past theoretical and empirical research, we uncovered four potential moderator variables for which there was sufficient information to conduct tests for moderation across studies of the relationship between unemployment and well-being: the unemployment rate in the study location, the level of unemployment insurance protection or benefits provided to unemployed workers, the average length of unemployment of individuals in the sample, and the type of sample (school leavers or unemployed adults).

Unemployment Rate

The current unemployment rate provides an indicator of the economy's general well-being (Dooley & Catalano, 1984). Turner (1995) argued that the "implications of losing a job in an area with high unemployment rates and minimal reemployment opportunities are undoubtedly different from those involved with being jobless during a time in which opportunities for reemployment are plentiful" (p. 214). On one hand, workers displaced during a time of high unemployment may experience less stress because they are able to attribute their bad situation to external causes. These dislocated workers could have less self-blame, thus diminishing the impact of unemployment on their morale and well-being. However, it seems much more plausible that a high unemployment rate is more stressful for job seekers since it makes the job search much more difficult and diminishes the likelihood of finding reemployment. Two studies support this latter conclusion, with results of lower mental health for unemployed individuals when unemployment rates were high (Cohn, 1978; Turner, 1995). Another study failed to show significant differences for unemployed individuals but found lower levels of psychological well-being for all study participants (Dooley, Catalano, & Rook, 1988). This discussion leads us to expect that results will show that the impact of job loss is greater with high unemployment rates.

Unemployment Protection

Unemployment benefits are government-subsidized social-security programs to financially support the living and job search of unemployed individuals for a certain time period. Unemployment-benefit systems vary considerably throughout the world, in terms of coverage, source of funds, qualifying conditions, benefit amount, duration of coverage, and the like (Social Security Administration Division of Research and Statistics, 1999). The economic literature indicates that indices of unemployment protection—such as unemployment-insurance wage-replacement ratio and coverage duration—are related to the duration of unemployment (Atkinson & Micklewright, 1991; Barron & Gilley, 1979). Though seldom

mentioned in the psychological literature, unemployment protection systems are a possible factor in explaining differential relationships between unemployment and well-being observed in studies conducted in various countries (cf. Murphy & Athanasou, 1999).

For example, Schaufeli and van Yperen (1993) found no differences in psychological distress among unemployed and employed workers in the Netherlands (a country with generous unemployment benefits). In contrast, a study of unemployed women in Hong Kong (with limited unemployment insurance benefits) found that over half of the sample could be classified as "probable clinical cases" (Lai, Chan, & Luk, 1997). These researchers attributed this level of distress to a lack of unemployment benefits. Therefore, it seems plausible that unemployed individuals in countries providing more generous unemployment benefits (higher replacement rate and longer coverage duration) on average experience less economic pressure than those in less generous countries and thus have higher well-being during unemployment. On the basis of the above discussion, we expect to find that the impact of unemployment is lower with higher levels of unemployment protection.

Length of Unemployment

How long the average participant in the sample has been unemployed at the time of the study may be another important moderator. Being without a job for longer may allow stress to accumulate (P. R. Jackson & Warr, 1984) as coping resources are depleted (e.g., Kinicki et al., 2000) and anxiety and tension to mount from the prospect of unemployment benefits running out and savings being exhausted. Thus, the financial detriment of job loss increases as unemployment duration extends (e.g., Brief, Konovsky, Goodwin, & Link, 1995; Huang & Perrucci, 1994; Kinicki et al., 2000; Sales, 1995). For example, Kinicki et al. (2000) found that financial strain increased and that unemployed workers displayed more coping behaviors as unemployment persisted over time. These considerations lead us to expect that studies that have individuals with longer unemployment duration will also have individuals reporting lower well-being.

Sample Type

Most studies about unemployment and well-being have concerned unemployed adults. However, there are several studies, most conducted in Australia (e.g., Feather & O'Brien, 1986; Tiggemann & Winefield, 1984) and the United Kingdom (e.g., P. R. Jackson et al., 1983; Layton, 1986), that have involved young adult "school leavers" (those who are jobless after leaving public school). Unemployment may have a different impact on school leavers than on adults (Donovan & Oddy, 1982; O'Brien, 1986). For example, most school leavers are not married and live with their parents and subsequently have fewer financial obligations than their traditional adult unemployed counterparts (O'Brien, 1986). However, because most school leavers have no previous employment history, they also lack the well-established occupational identity that most unemployed workers have. The pressure to establish such an identity is an extra burden for school leavers when they become unemployed (Donovan & Oddy, 1982), and this pressure for identity formation may manifest in diminished psychological well-being. We therefore expect that the impact of unemployment may be lower for adult samples than for young adult school leavers.

Method

Data Collection

Articles were identified for potential inclusion in the meta-analysis by conducting electronic searches of computerized databases using the key words *job loss, unemployed, layoff and employee, layoff and unemployment, laid off worker, job displacement,* and *dislocated worker* in the ABI/Inform (1985–2002) and PsycINFO (1887–2002) databases. In addition, we conducted a manual search of our respective files to identify studies that did not appear in the electronic searches. We also made attempts to get all relevant non-U.S. articles by reviewing abstracts. Those written in English or having English translations available were reviewed. These processes resulted in the identification of approximately 5,010 articles. This set of articles was then screened for relevance to this review by the first two authors.

Studies were excluded if they were not empirical (e.g., several were practitioner-oriented or offered advice to unemployed workers), if they were not published in a refereed journal (i.e., no dissertations or book chapters), if they were not directly related to job loss or unemployment, and if they did not examine at least one mental or physical health variable and report zero-order correlations or a statistic that could be converted (e.g., F, t, χ^2). An article was discussed until a consensus was reached. This process resulted in the inclusion of 104 studies with 146 independent samples.

Developing Broad Coding Categories

Our literature search revealed a multitude of variables related to the unemployment experience, including over 100 potential predictor and criterion variables and a total of 737 correlations. Given the diversity of these variables, it was necessary to consolidate the database by developing broad categories of variables (James & James, 1989; see both Kanfer et al., 2001, and Kinicki et al., 2002, for similar approaches). To reduce the 100 variables into meaningful homogeneous constructs, we started with the frameworks outlined in the literature review (i.e., Diener et al., 1999; McKee-Ryan & Kinicki, 2002) along with past research, underlying theory, and variable measures to develop construct definitions. We then consulted the original-source articles for construct definitions and to examine item content and worked collaboratively to categorize variables into overarching constructs for use in the meta-analysis. If there was not a clear case for combining variables, they were left independent. Discussions continued until 100% agreement was reached.

This process resulted in identifying a set of 5 outcome variables (3 psychological and 2 physical well-being outcomes) and 22 predictor variables for use in the meta-analysis. These categories are summarized in Table 1. The final variable set included 437 correlations. When there were multiple measures for a variable within a study, correlations were averaged to prevent double counting. When necessary, we reversed correlation signs for consistency purposes. All variables ultimately were coded such that a higher number reflects more of the variable as defined by a category. For example, mental health includes measures of depression and anxiety. These variables were recoded to reflect positive rather than negative mental states.

Special coding situations were discussed carefully among the authors. For example, there were a small number of situations with more than one unemployed group compared with an employed group (e.g., Creed & Reynolds, 2001). To prevent double counting of the employed sample, we first weighted means and standard deviations of different unemployed groups by their corresponding sample sizes to form one set of statistics for the total unemployed group, then the pooled unemployed group was

compared with the employed group to create a single effect size. As an additional example, some studies reported both cross-sectional and longitudinal information about the health status of unemployed and employed (reemployed) individuals. In this case, we included relevant data for each type of analysis (e.g., cross-sectional unemployed vs. employed comparison, changes in well-being following movement from unemployment into employment, predicting Time 2 employment status from Time 1 well-being, etc.).

Meta-Analytic Procedures

Our meta-analytic method was based on Hunter and Schmidt's (1990) work. We began by converting effect sizes to a common statistic (*d* or *r*; see Arthur, Bennett, & Huffcutt, 2001, p. 162, for a complete list of transformation formulas). Then, sample-size weighted mean effect sizes were computed. The next step was to calculate the corrected mean effect size by adjusting for measurement error. Because reliabilities were not reported in all studies, mean reliability for each variable was used to correct for measurement error. Table 2 presents the reliability distributions of the measures. No estimates of reliability were reported for objective physical health, financial resources, demographics, and employment status. The reliability of each of these variables was assumed to be 1.0, leading to conservative mean effect-size estimates for relationships with these variables. No adjustment was made for the two studies (Vinokur, Price, & Caplan, 1996; Vinokur & van Ryn, 1993) that reported correlations for social undermining because the authors had already adjusted for measurement error. The final step in the analysis was calculating confidence intervals and testing for moderated relationships. For the meta-analysis of *r*, a formula provided by Osburn and Callender (1992, p. 116, Equation 5) was used to compute the confidence intervals. A similar formula provided by Hunter and Schmidt (1990, p. 430) was used for the meta-analysis of *d*, which reflects the difference of the group means of the unemployed and the employed group divided by the pooled standard deviation. These two formulas are appropriate for both homogeneous and heterogeneous situations and were similarly used by Huffcutt, Conway, Roth, and Stone (2001). We judged the magnitude of significant effects using Cohen's (1988) categorization: small-sized effects are $d_c < .49$ or $r_c < .29$, medium-sized effects are $.50 < d_c < .79$ or $.30 < r_c < .49$, and large-sized effects are $d_c > .80$ or $r_c > .50$. Finally, *Q* statistics were used to test for moderation (Hedges & Olkin, 1985).

We conducted moderator analysis using the subgroup method suggested by Hunter and Schmidt (1990). Because of the sample size restriction, moderator analysis was only conducted for the cross-sectional comparison of unemployed and employed individuals. Potential moderator variables were first dichotomized, and then separate meta-analyses were conducted for each subgroup. Moderators are indicated when the 95% confidence intervals for the subgroups do not overlap. The average unemployment rate was dichotomized at the median, forming low and high groups (cf. Hom & Kinicki, 2001). When the unemployment rate was not reported for the city and year in which the study was conducted, we used corresponding data by country (for non-U.S. samples) or state (in the United States) from the International Labour Organization and/or the U.S. Department of Labor Web sites. If no data collection time frame was provided, we used the unemployment rate 2 years before publication or 1 year before submission acceptance.

Unemployment protection was coded based on the *World Labour Report 2000* (International Labour Organization, 2000). This study identified 14 "top level" countries that provide generous benefits to unemployed workers, including a high proportion of replacement income, benefits that extend at least 12 months, and secondary benefits available when primary benefits are exhausted. In the current study, Denmark, Finland, Netherlands, Sweden, and Norway were coded as "high" unemployment protection from the list of top-level countries. The "medium-benefit" countries were those that provided a lower proportion of replacement income, provided benefits for less than a year, and/or did not have a secondary benefit set available. Australia, Canada, Hong Kong, Italy, Israel, New Zealand, the United Kingdom, and the United States were coded as medium-benefit unemployment protection in the current study. (See International Labour Organization, 2000, for more specific information about this categorization scheme.)

Length of unemployment was dichotomized at 6 months, forming short- and long-term categories. This convention is commonly used both by the government (e.g., Ilg, 1994) and academics (e.g., Dooley et al., 1988; Hammarström & Janlert, 2002; P. R. Jackson & Warr, 1984) to mark the transition to long-term unemployment. Finally, unemployed *sample type* was coded as either school leaver or adult on the basis of the sample description provided in the source articles.

Results

Impact of Unemployment on Psychological and Physical Well-Being

As previously discussed, there are three types of studies that pertain to assessing the average impact of unemployment on individual psychological and physical well-being: (a) cross-sectional comparisons of unemployed and employed individuals, (b) longitudinal examinations of changes in well-being as individuals moved from unemployment into reemployment, and (c) longitudinal examinations of changes in well-being as individuals moved from employment into unemployment. Table 3 presents results from the separate meta-analysis of these three different types of studies for those criteria examined in past studies. Our outcome categories were not available for all types of studies. For example, domain satisfaction, where we found only marital and family satisfaction measures, was only measured in cross-sectional studies comparing unemployed and employed individuals and not in longitudinal studies.

Cross-Sectional Comparison: Unemployed Versus Employed

We identified 52 cross-sectional studies containing 64 independent samples that compared the well-being among 6,684 unemployed and 15,988 employed individuals. Unemployed workers had significantly lower mental health ($d_c = -.57$), life satisfaction ($d_c = -.48$), marital or family satisfaction ($d_c = -.21$), and subjective physical health ($d_c = -.45$) than their employed counterparts. Though the relationship for objective physical health was in the expected direction, the 95% confidence interval included zero (see Table 3).

Longitudinal Effects of Reemployment

Table 3 shows that 15 longitudinal studies involving 19 samples and 1,911 total participants examined changes in the well-being of unemployed workers as they became reemployed. Significant improvements in mental health ($d_c = -0.89$), life satisfaction ($d_c = -3.04$), and subjective physical health ($d_c = -.36$) were found when workers became reemployed. The latter two effects should be interpreted with caution, however, because of the very small total sample sizes and numbers of included studies.

Longitudinal Effects of Job Loss

Eight studies with 10 independent samples and 660 participants provided longitudinal data that followed individuals from employ-

Table 1
Variable Category Descriptions and Example Measures

Variable	Description	Examples of measures used
	Outcomes	
Psychological		
Mental health	Psychological well-being and satisfactory adjustment to society and to the ordinary demands of life (Webster's Dictionary, 1996)	GHQ–12, GHQ–20, GHQ–30, General Health Questionnaire (Goldberg, 1978) Beck Depression Inventory (Beck & Beck, 1972) Center for Epidemiologic Studies–Depression Scale (Radloff, 1977) Hopkins Symptom Checklist (Derogatis, Lipmann, Rickels, Uhlenhuth, & Covi, 1974) Manifest Anxiety Scale (Taylor, 1953) State–Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970)
Life satisfaction	Global assessment of a person's quality of life (Shin & Johnson, 1978)	Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) Life Satisfaction Scale (Quinn & Shepard, 1974) Present Life Satisfaction Scale (Warr, 1978) Quality of Life Delighted–Terrible Scale (Andrews & Withey, 1976)
Domain satisfaction		
Marital/family satisfaction	Satisfaction with one's marital life, partner or spouse, or family	Dyadic Adjustment Scale (Spanier, 1976) Family Relations Scale (Brand & Pullen, 1991)
Physical		
Subjective physical health	Self-rated physical health, illness, symptoms, or health-related behaviors (e.g., smoking and alcohol use)	Proxy Measure of Health Status (Kisch, Kovner, Harris, & Kline, 1969) Psychophysiological disorders (Brett & Werbel, 1980) Single item perceived health (Payne & Hartley, 1987) U.S. National Health Survey (U.S. Department of Health, Education, and Welfare, 1972) Physical Symptoms Scale (Spector, 1988)
Objective physical health	Objective measures of physical health	Cortisol levels (e.g., Brenner & Starrin, 1988; Claussen, 1994; Hall & Johnson, 1988)
	Predictors	
Work-role centrality	The importance and significance of working in an individual's overall life or the degree of cognitive investment into the work role	Employment importance (Feather & Bond, 1983) Employment Commitment Scale (Banks & Ullah, 1988; Warr, Cook, & Wall, 1979) Kanungo Work Involvement Scale (Kanungo, 1982) Valence of work (Feather & Davenport, 1981) Protestant Work Ethic Scale (Blood, 1969)
Coping resources		
Personal		
Core-self-evaluation	Overall evaluations that represent one's appraisal of people, events, and things in relation to oneself (Judge, Locke, & Durham, 1997)	Self-Esteem Inventory (Rosenberg, 1965) Life Orientation Test (Scheier & Carver, 1985) Internal–External Locus of Control Scale (Rotter, 1966) Work Locus of Control Scale (Spector, 1988) Neuroticism Scale of the Revised Eysenck Personality Questionnaire (Eysenck & Eysenck, 1991)
Social		
Social support	Instrumental and emotional aid exchanged through social interactions (Latack et al., 1995)	Social Support Scale (Caplan, Cobb, French, Harrison, & Pinneau, 1975) Social support (Gore, 1978) Social Provisions Scale (Cutrona & Russell, 1988) Positive social support (Abbey, Abramis, & Caplan, 1985) Brief Social Support Questionnaire (Siegert, Patten, & Walkey, 1987, as cited in Sarason, Levine, Basham, & Sarason, 1983) Inventory of Socially Supportive Behaviours (Barrera & Ainlay, 1983)
Social undermining	Behaviors directed toward a person that display negative affect, criticism, and hindrance in attaining personal goals (Vinokur, Price, & Caplan, 1996)	Social undermining (Abbey, Abramis, & Caplan, 1985)

Table 1 (*continued*)

Variable	Description	Examples of measures used
	Predictors (*continued*)	
Financial		
Financial resources	Available material resources (e.g., savings, investments, and income from other sources or family members)	Average weekly income (Ullah, 1990) Net and gross financial resources (Gowan, Riordan, & Gatewood, 1999)
Financial strain	Assessment of financial difficulties	Financial Concerns Scale (Pearlin & Radabaugh, 1976) Financial Stress Scale (Feather, 1989) Financial Strain Scale (Warr & Jackson, 1984)
Time structure	Extent to which time is used in a structured and purposeful way (Feather & Bond, 1983)	Time Structure Questionnaire (Bond & Feather, 1988) Structured time use (Feather & Bond, 1983) Time structure (Rowley & Feather, 1987)
Cognitive appraisal		
Stress appraisal	Appraisal of job loss as a negative event or stressor (e.g., Lazarus & Folkman, 1984)	Perceived need for a job (Feather & Davenport, 1981) Perceived problems from unemployment (Payne, Warr, & Hartley, 1984) Intensity (life disruption caused by job loss: Leana & Feldman, 1991)
Internal attribution for job loss/unemployment	Personal responsibility or blame for job loss and unemployment	Control over becoming unemployed (Cvetanovski & Jex, 1994) Causal attribution for unemployment (Feather & Davenport, 1981)
Reemployment expectation	How likely the person thinks it is that she/he will be able to find a suitable new job	Reversibility of job loss (Leana & Feldman, 1991) Specific employment confidence (Wiener, Oei, & Creed, 1999)
Coping strategies		
Job-search effort	Degree of engagement in job search activities	Job Search Scale (Leana & Feldman, 1990) Proactive Search Scale (Kinicki & Latack, 1990) Finnish Institute of Occupational Health Job Seeking Activity Scale (Vuori & Vesalainen, 1999) Job-seeking behaviors (Vinokur & Caplan, 1987) Job-search intensity (Shamir, 1986)
Problem-focused coping	Efforts to directly manage or control the stressors related to job loss and/or unemployment	Proactive Self-Assessment Scale (Kinicki & Latack, 1990) Seeking Retraining, Seeking to Relocate, and Seeking Financial Resources scales (Leana & Feldman, 1990)
Emotion-focused coping	Efforts to avoid or escape from the stressors related to job loss and/or unemployment	Non-Work Organization, Distancing From Loss, and Job Devaluation scales (Kinicki & Latack, 1990) Seeking Social Support, Seeking Counseling, and Community Activism scales (Leana & Feldman, 1990)

ment into unemployment. Table 3 shows a significant reduction in mental health following job displacement ($d_c = -0.38$).

Longitudinal Impacts of Well-Being on Reemployment

Our next set of analyses examined the relationship between well-being during unemployment and the probability of reemployment. Seven studies involving 5,135 individuals and nine independent samples were used in this meta-analysis. The analysis involved comparing the initial psychological well-being of groups of displaced workers who either became reemployed after being displaced or remained unemployed over time. An effect size d was calculated for each study; this represented the difference between the average group mental health levels at Time 1 for those who were reemployed at Time 2 and those who were still unemployed at Time 2 divided by the pooled standard deviation. The sample size weighted mean effect size d and the sample size weighted corrected mean effect size d_c were calculated. Although those who found employment by the end of the collected studies had somewhat higher levels of well-being while unemployed than those who had not found employment ($d = 0.09$; $d_c = 0.10$), the 95% confidence interval included zero (CI = −0.07, 0.28).

Correlates of Well-Being During Unemployment

Results regarding the relationships between correlates and the outcomes of psychological and physical well-being are presented in Table 4. Fifty-nine studies involving 15,881 individuals provided 67 independent samples for this meta-analysis. Data were lacking for the other criteria (domain satisfaction and objective physical health).

Work-Role Centrality

Unemployed individuals' work-role centrality had significant negative relationships with their mental health ($r_c = -.34$) and life satisfaction ($r_c = -.14$), respectively. There was no relationship between work-role centrality and subjective physical health during unemployment.

Table 2
Descriptive Statistics for the Reliability Distributions

Variable	*k*	*M*	*SD*
Mental health	53	.83	.10
Life satisfaction	12	.82	.08
Marital/family satisfaction	1	.91	
Subjective physical health	1	.82	
Work-role centrality	13	.73	.08
Coping resources			
Core-self-evaluation	17	.81	.11
Social support	6	.80	.13
Financial strain	8	.85	.06
Time structure	7	.71	.13
Cognitive appraisal			
Stress appraisal	2	.75	.31
Internal attribution	2	.50	.22
Reemployment expectation	8	.76	.12
Coping strategies			
Job-search effort	12	.80	.07
Problem-focused coping	2	.71	.05
Emotion-focused coping	6	.71	.04

Note. *k* = number of samples; *M* = mean reliability; *SD* = standard deviation of reliability.

Coping Resources

Personal coping resources. Core self-evaluations had significant positive relationships with mental health (r_c = .55), life satisfaction (r_c = .47), and physical well-being (r_c = .14).

Social coping resources. Unemployed workers with greater social support felt better psychologically than those without such support. Social support had a positive relationship with mental health (r_c = .26) and life satisfaction (r_c = .43) and was unrelated to subjective physical health. Because our analysis collapsed across various kinds of support (e.g., instrumental support, emotional support, or support from friends), we explored these relationships further by looking within subsets of social support of varying types and from various sources. Results revealed that all facet-level results were consistent with the overall results. With respect to social undermining, this negative social resource was associated with significantly lower mental health (r_c = −.36). Data were not available for the relationship between social undermining and life satisfaction or physical health.

Financial coping resources. Table 4 shows that financial resources were related to significantly higher mental health (r_c = .11) and life satisfaction (r_c = .41) among unemployed individuals. Perceived financial strain was associated with lower mental health (r_c = −.45) and life satisfaction (r_c = −.38). Neither financial variable was significantly related to subjective physical health, although studies for these relationships were limited (*k* = 4) so this finding is tentative.

We suggested in our literature review that we expected financial strain to be more strongly related to well-being than financial resources. *z* tests partially confirmed this expectation: Financial strain was more strongly related to mental health than were financial resources (z = 15.16, $p < .05$). Contrary to predictions, however, life satisfaction was more strongly linked to financial resources than to financial strain, but the difference was not significant (z = 1.24, $p > .05$). The relationship was in the expected direction for subjective physical health, but the *z* test was not significant (z = 1.07, $p > .05$).

Time structure. Results revealed that unemployed individuals' time structure was associated with positive mental health (r_c = .31). We cannot draw any conclusions about the relationships between time structure and life satisfaction or physical well-being because of a lack of research regarding these outcomes (see Table 4).

Table 3
Meta-Analytic Results of the Effect of Unemployment on Psychological and Physical Well-Being Outcomes

Variable	*k*	*N*	*d*[a]	d_c	95% CI	*Q*
Cross-sectional comparison: Unemployed vs. employed						
Psychological well-being						
Mental health	60	21,735	−0.52	−0.57	(−0.65, −0.49)	412.04**
Life satisfaction	7	1,249	−0.44	−0.48	(−0.68, −0.28)	17.61**
Marital/family satisfaction	4	419	−0.20	−0.21	(−0.36, −0.06)	2.12
Physical well-being						
Subjective physical health	3	1,136	−0.41	−0.45	(−0.74, −0.16)	15.26**
Objective physical health	3	484	−0.89	−0.89	(−1.96, 0.20)	99.00**
Longitudinal effects of reemployment						
Psychological well-being						
Mental health	19	1,911	−0.82	−0.89	(−1.08, −0.70)	61.90**
Life satisfaction	2	106	−2.79	−3.04	(−5.86, −0.22)	43.81**
Physical well-being						
Subjective physical health	1	162	−0.33	−0.36		
Longitudinal effects of job loss						
Psychological well-being						
Mental health	10	660	−0.35	−0.38	(−0.60, −0.16)	16.33**

Note. *k* = number of samples; *d* = mean weighted effect size; d_c = mean corrected weighted effect size; 95% CI = confidence interval of the d_c; *Q* = homogeneity of d_c.
[a] A positive sign of *d* and d_c represents that the unemployed group had higher well-being than the employed group, whereas a negative sign of *d* and d_c represents that the employed group was better off.
** $p < .01$.

Table 4
Meta-Analytic Results for the Correlates of Well-Being During Unemployment

Variable	Psychological well-being: Mental health				Psychological well-being: Life satisfaction				Physical well-being: Subjective physical health			
	k	*N*	*r*	r_c	*k*	*N*	*r*	r_c	*k*	*N*	*r*	r_c
Work-role centrality	19	4,398	−.26	−.34[a]	3	318	−.11	−.14[a]	3	1,467	−.03	−.04
Coping resources												
Personal												
Core-self-evaluation	26	5,186	.45	.55[a]	6	793	.38	.47[a]	4	623	.11	.14[a]
Social												
Social support	20	4,858	.21	.26[a]	3	347	.34	.43[a]	3	451	.00	.01
Social undermining	2	1,700	−.36	−.36[a]	—	—	—	—	—	—	—	—
Financial												
Financial resources	9	4,393	.10	.11[a]	2	142	.37	.41[a]	2	1,353	−.01	−.02
Financial strain	17	5,257	−.38	−.45[a]	3	260	−.32	−.38[a]	2	421	−.07	−.08
Time structure	12	2,426	.24	.31[a]	1	78	.38	.50	—	—	—	—
Cognitive appraisal												
Stress appraisal	4	881	−.30	−.38[a]	1	157	−.42	−.54	2	556	−.20	−.25
Internal attribution	6	714	.06	.08	2	329	−.11	−.16[a]	2	329	−.07	−.10[a]
Reemployment expectation	11	4,778	.23	.29[a]	4	896	.42	.54[a]	1	157	.31	.40
Coping strategies												
Job-search effort	20	8,214	−.09	−.11[a]	5	584	−.08	−.10	2	1,111	.01	.01
Problem-focused coping	3	585	.13	.17[a]	2	257	−.03	−.04	1	157	−.09	−.12
Emotion-focused coping	7	1,137	.11	.14[a]	4	503	.04	.05	1	157	−.06	−.09
Human capital and demographics												
Education	10	4,688	.07	.08[a]	2	346	.05	.05[a]	—	—	—	—
Ability	2	253	.04	.05	—	—	—	—	—	—	—	—
Occupational status	3	742	−.09	−.10	2	343	.04	.04	1	399	−.05	−.05
Marital status	4	925	.03	.04	2	422	.15	.17[a]	1	157	.16	.18
Gender	14	6,763	.09	.09[a]	2	422	.05	.06[a]	1	157	.20	.23
Race	5	4,021	−.05	−.06[a]	1	265	.05	.06	—	—	—	—
Number of dependents	2	1,004	−.11	−.12[a]	—	—	—	—	1	954	−.01	−.01
Length of unemployment	23	5,122	−.08	−.09[a]	2	343	−.16	−.18[a]	2	976	−.08	−.09[a]
Age	20	7,091	.03	.03	3	424	.01	.01	1	954	−.03	−.03

Note. Dashes indicate that data were not available. Occupational status was coded 0 = nonprofessional, 1 = professional or managerial. Marital status was coded 0 = single, 1 = married. Gender was coded 0 = female, 1 = male. Race was coded 0 = non-White, 1 = White. *k* = number of samples; *r* = mean weighted correlation; r_c = mean corrected weighted correlation.
[a] The 95% confidence interval does not include zero.

Cognitive Appraisal

Results generally supported the pattern of relationships between cognitive appraisal and well-being. Stress appraisals were associated with lower mental health ($r_c = -.38$), and internal attributions for job loss were significantly related to both lower life satisfaction ($r_c = -.16$) and physical health ($r_c = -.10$). Further, displaced workers with positive reemployment expectations had higher levels of mental health ($r_c = .29$) and life satisfaction ($r_c = .54$). Table 4 shows that two of the remaining correlations had confidence intervals that included zero and that two were based on a limited number of studies.

Coping Strategies

Job search effort. Exerting effort in a job search was associated with lower mental health during unemployment ($r_c = -.11$). Table 4 also reveals that job search effort was unrelated to life satisfaction and subjective physical health.

Problem-focused and emotion-focused coping. Higher levels of problem-focused ($r_c = .17$) and emotion-focused coping ($r_c = .14$) during unemployment were weakly associated with higher levels of mental health (see Table 4). These results collapse across different forms of problem-focused (e.g., seeking retraining and seeking relocation are considered together) and emotion-focused coping (e.g., distancing from loss and seeking social support are considered together) because of a lack of studies focused on coping strategies in the literature. Examination of results by subscale level was consistent with the aggregate results, with one exception: Seeking social support ($k = 1$) and seeking counseling ($k = 1$; both forms of emotion-focused coping) were negatively rather than positively associated with well-being. However, given that these two relationships were each based on only one study, we cannot conclusively determine that different forms of emotion-focused coping are differentially related to well-being.

Human Capital and Demographics

Human capital: Education, ability, and occupational status. Higher levels of education were weakly associated with mental health ($r_c = .08$) and life satisfaction ($r_c = .05$). It is not possible to draw clear conclusions about relationships between the criteria

and ability and occupational status because of the small number of studies in these cells (see Table 4).

Demographics: Marital status, gender, race, number of dependents, length of unemployment, and age. Those with more dependents had lower mental health ($r_c = -.12$), whereas those who were married were more satisfied with their lives ($r_c = .17$). Longer unemployment duration was weakly linked to lower mental health ($r_c = -.09$), life satisfaction ($r_c = -.18$), and subjective physical health ($r_c = -.09$). Mental health was slightly lower for White unemployed workers than for unemployed workers from other racial groups ($r_c = -.06$), and men had slightly higher levels of mental health ($r_c = .09$) and life satisfaction ($r_c = .06$) than their female counterparts. As expected—given the conflicting theoretical propositions regarding the relationship between age and well-being during unemployment—there was no clear pattern of relationships between age and our study outcomes.

Moderator Analyses

Table 5 summarizes our findings across four potential moderators of the relationship between mental health and employment status. The results for these moderators are mixed. Specifically, the unemployment rate at the time of the study did not moderate the relationship between mental health and employment status. Although there was less distinction between the well-being of the unemployed and the employed samples when there were generous unemployment benefits available than under less generous conditions, the difference only approached significance. In contrast, results revealed that the length of unemployment and study type both were significant moderators: The long-term unemployed samples displayed lower well-being to a much greater extent than did the short-term unemployed samples ($d_c = -0.97$ and -0.43), and unemployed school leavers had lower well-being than did unemployed adults ($d_c = -0.82$ and -0.53).

Discussion

This study is among the first to comprehensively evaluate the quantitative relationship between unemployment and well-being. Our goal was to be as inclusive and broad as possible when accumulating studies that encompassed multiple disciplines such as economics, sociology, public health, family studies, and industrial and organizational psychology. To accomplish this integrative effort, we first needed to identify a taxonomy with which to evaluate over 100 potential predictor and criterion variables encompassing 737 correlations. We identified 5 common outcome variables, 22 common predictor variables, and 4 moderator variables by using theoretical frameworks provided by Diener et al. (1999) and McKee-Ryan and Kinicki (2002) and by relying on past research, underlying theory, and variable descriptions in published studies. Meta-analysis then was used to analyze the data in pursuit of four primary research questions.

The first research question concerns the average impact of unemployment on individual well-being. Results underscore three general conclusions. First, mental health is the most widely studied outcome in the literature. Across the 27 variables reported in Tables 3 and 4, about 77% of the correlations included a mental health variable. That leaves less than one quarter of correlations across the other four outcome variables (life satisfaction, marital and family satisfaction, subjective physical health, and objective physical health). Indeed, many of the meta-analytic relationships on nonmental health variables could not be computed or could only be computed on very small sample sizes. Additionally, as in other literature studying well-being (Myers & Diener, 1995), the job-loss literature tends to incorporate more negative (e.g., falling into the domain of unpleasant affect) than positive outcome variables. Future research might better tap positive affective outcomes, as well as examine a broader range of well-being variables.

Table 5
Moderator Analysis for Mental Health

Variable	k	N	d[a]	d_c	95% CI	z
Unemployment rate						
Low (≤median)	30	11,780	−0.51	−0.56	(−0.67, −0.45)	
High (>median)	30	9,955	−0.53	−0.58	(−0.69, −0.47)	
Difference test						0.28
Unemployment protection						
High benefit	11	3,361	−0.41	−0.46	(−0.62, −0.29)	
Medium benefit	49	18,374	−0.54	−0.59	(−0.68, −0.51)	
Difference test						1.54
Length of unemployment						
Short-term (<6 months)	6	2,645	−0.39	−0.43	(−0.69, −0.17)	
Long-term (≥6 months)	7	1,687	−0.89	−0.97	(−1.26, −0.69)	
Difference test						2.75**
School leaver vs. adult unemployed						
School leaver	12	2,985	−0.75	−0.82	(−1.07, −0.55)	
Adult	48	18,750	−0.49	−0.53	(−0.61, −0.46)	
Difference test						2.23*

Note. k = number of samples; d = mean weighted effect size; d_c = mean corrected weighted effect size; 95% CI = confidence interval of the d_c.
[a] A negative sign of d and d_c represents that the employed group had higher well-being than the unemployed group.
* $p \leq .05$. ** $p \leq .01$.

Second, the meta-analytic results are suggestive that unemployment has, on the average, a negative effect on mental health. How strong of a causal statement can be made from these data? It is unrealistic for us to claim we can prove a causal relationship between unemployment and mental health as there are limitations to the causal interpretation of each type of study that has examined this relationship. Yet, we do feel it is appropriate to state that the evidence is strongly supportive of a causal relationship because there is consistency in results across multiple kinds of studies and hundreds of data points. In cross-sectional studies, unemployed individuals had lower well-being than employed individuals. In longitudinal studies, well-being declines as individuals move from employment into unemployment but improves as individuals move from unemployment into reemployment. Our examination of correlates suggests that there are several aspects of the unemployment experience (e.g., financial concerns, work-role centrality) that are the actual factors responsible for reduced well-being during unemployment, meaning a causal suggestion of a relationship between unemployment and mental health is molar in nature or exists at a very broad level (cf. Cook & Campbell, 1979). For example, Price, Friedland, and Vinokur (1998) suggested that job loss and unemployment bring about a "cascade" of secondary stressors such as worry, uncertainty, and financial, family, and marital difficulties.

Third, unemployed workers' response to unemployment is not homogeneous. This heterogeneity is evidenced by the presence of moderators in seven out of eight relationships reported in Table 3. Research Question 4 identified four potential moderators for which we had adequate data to test for moderation. Unfortunately, we were only able to test for moderation of cross-sectional relationships between employment status and mental health because of the small number of studies that investigated relationships with other criteria. Even so, duration of unemployment and life status (i.e., unemployed school leaver vs. unemployed adults) appear to be related to the magnitude of the effect of unemployment on the mental health of displaced workers. The detrimental effect of job loss was higher in studies with individuals unemployed longer. It also appears that school leavers face the extra burden of establishing their occupational identity when faced with early career unemployment, and these early experiences may manifest in diminished well-being and employment outcomes over time (Hammarström & Janlert, 2002).

In contrast, results reveal that the current unemployment rate at the time of data collection was not related to the mental health effects of unemployment. Perhaps this reflects the overall impact of a strong or poor economy on the psyche of the population as a whole, masking the effects of unemployment (cf. Dooley et al., 1988). As an alternative, an individual's perception of the unemployment rate may have a stronger impact on well-being than the actual unemployment rate. This explanation is consistent with the belief that the appraisal of stressors is more important than the existence of stressors in influencing how people respond to life events (Lazarus & Folkman, 1984) and specifically job loss (Latack et al., 1995; McKee-Ryan & Kinicki, 2002). One final explanation involves the measurement of unemployment. It is plausible that the unemployment rate for a study does not reflect the local labor market, as there may have been "pockets" of unemployment that were higher or lower than country or regional averages: Statistics used to provide the unemployment rate tend to be based on entire countries or regions. Moreover, many researchers failed to provide the unemployment rate at the time of the study, leading us to use proxy measures or to estimate the study's unemployment rate. Future research is needed to more clearly examine these alternative explanations, and researchers are encouraged to provide detailed information about the current unemployment rate at the time of data collection.

Moreover, the mental health effects of unemployment did not vary significantly on the basis of the availability of unemployment protection benefits, although differences approached significance. Despite the increased replacement wages and length of benefits, generous unemployment benefits did not protect displaced workers from the detrimental effects of job loss. This finding is similar to that of Ouweneel (2002), who found no relationship between social-security spending and unemployed worker well-being. Although overall national wealth is related to individual well-being (cf. Diener & Diener, 1995; Veenhoven, 1989), the effect on well-being does not translate for social security expenditures (Ouweneel & Veenhoven, 1995). Perhaps our finding is due, however, to the lack of studies in our meta-analysis that were conducted in very low benefit countries, such as China, producing a restriction of range.

Our second research question examined the relationship between individual well-being during unemployment and subsequent reemployment outcomes. Contrary to Taris's (2002) proposition that poor mental health deteriorates an individual's capacity to become reemployed, there was no significant relationship between mental health and future reemployment, and data were not available to examine the reemployment outcome of poor physical health. Given that previous studies found both supportive and unsupportive results related to Taris's prediction, it is plausible that this relationship is moderated by other variables such as human capital and coping resources. (Our results reflect moderation with a significant Q statistic of 73.74.) For example, Kinicki et al.'s (2000) findings revealed that displaced workers possessing greater coping resources engaged in more emotion-focused than problem-focused coping following job loss and remained unemployed longer than those displaced workers with low coping resources. It is possible that displaced workers with poorer mental health and lower levels of coping resources are more likely to accept the first job opportunity available to them regardless of the quality of reemployment. In contrast, and similar to Kinicki et al.'s results, those with higher mental health and high coping resources may be more likely to persist at finding a job with a high quality of reemployment. Future research is needed to examine the veracity of this plausible explanation.

These results also point to the important shift occurring in unemployment research from an ultimate outcome of reemployment to the outcome of *quality of reemployment*, because the positive effects of becoming reemployed may be limited to those who regain satisfactory new jobs (e.g., Feldman, Leana, & Bolino, 2002; Kinicki et al., 2000; Latack et al., 1995; Leana & Feldman, 1995; Wanberg, 1995). For example, those who are dissatisfactorily reemployed continue to cope with job loss at similar levels to unemployed workers (Kinicki et al., 2000), and those who become employed too quickly after being displaced may actually be worse off psychologically (Leana & Feldman, 1995). Such workers may face "relative deprivation" or be "underemployed" (Feldman et al., 2002). Underemployment reflects employment in a poorer quality

job, in terms of level in the organization, wages, or skill utilization (Feldman et al., 2002), and has been linked to a whole host of negative outcomes, including diminished job satisfaction, work commitment, job involvement, internal work motivation, life satisfaction, and psychological well-being (see Feldman, 1996, for a comprehensive review). Unfortunately, not enough data were available to summarize this research meta-analytically. Researchers are encouraged to adopt a common definition and measure for the quality of reemployment and to examine the quality of reemployment as a criterion in future research.

Our third research question focused on identifying the correlates of psychological and physical well-being during unemployment. Overall, the pattern of relationships highlights the importance of work-role centrality and the coping variables of coping resources, cognitive appraisal, and coping strategies over a host of human capital and demographic variables. There are five important conclusions from results pertaining to the correlates of psychological and physical well-being. First, work-role centrality is associated with lower mental health and life satisfaction during unemployment. These findings are consistent with identity theory (e.g., Ashforth, 2001). Future research is needed to more fully explore the relationship between work-role centrality and well-being and to determine the types of employees more likely to view work as an important component of their personal identity (cf. Price et al., 1998; Turner, 1995).

Second, the possession of coping resources plays an important role in facilitating well-being during unemployment. Results suggest that positive core self-evaluations, the presence of social support and financial resources, and structured use of one's time are related to higher well-being, whereas social undermining and financial strain are related to lower well-being. Some of the largest relationships across all three outcome variables were for core self-evaluations, which include self-esteem, optimism, neuroticism, and an internal locus of control. Having a generally positive self-view is a protective resource when faced with job loss and unemployment. This discovery provides a preliminary extension of Judge and colleagues' findings that core self-evaluations are an important component of job-relevant variables, such as job satisfaction and job performance (e.g., Erez & Judge, 2001; Judge & Bono, 2001; Judge et al., 1997, 1998). Because these results reflect an aggregation of studies that measured a single core-self-evaluation variable, future research is needed to directly examine the core-self-evaluation construct in an unemployment setting. Unemployed workers who experience supportive social relationships also fare better than those without such relationships in terms of both mental health and life satisfaction. These results are consistent with previous meta-analyses that found social support to be positively related to subjective well-being (Pinquart & Sörensen, 2000) and to diminish the impact of stressors on experienced strains (Viswesvaran et al., 1999).

Moreover, financial resources and financial strain are important components of individual well-being during unemployment. The magnitude of the effect size between mental health and financial strain was over three times that of financial resources. This trend underscores the importance of the appraisal of one's financial situation, not the mere presence of savings and investments. Perhaps all financial resources are not liquid enough to be drawn on or the unemployed person may face substantial short- or long-term penalties for using financial resources such as retirement accounts. The differences may also reflect varying degrees of financial obligations for different individuals who have lost their job. It is interesting to note that the trend reverses when the outcome of life satisfaction is examined. Financial reserves positively relate to satisfaction among unemployed individuals, whereas financial strain or worries do so to a lesser degree. These results must be interpreted with extreme caution, however, because of the small number of studies included in the analysis. Future research is needed to unravel the web of relationships between financial resources and financial strain and their various outcomes.

The final coping resource examined in the current study was structured time use. This is an important variable because unemployment removes a major part of the familiar routine of daily living. Though unemployed individuals tend to report lower levels of time structure (e.g., T. Jackson, 1999), mental health is higher for those who are able to impose daily routines on their lives, to remain active, and to use their time in a structured way (e.g., Wanberg et al., 1997). Future research is needed to determine how structured time use relates to personality variables such as being proactive, as well as its relationship to role demands.

Third, our results suggest those who appraise job loss more negatively may face diminished well-being and that positive expectations for future reemployment are related to higher well-being. These trends highlight the importance of the individual's primary and secondary appraisal of job loss (Lazarus & Folkman, 1984). The stress appraisal reflects the individual's primary appraisal: What does job loss mean to me? Reemployment expectations reflect secondary appraisal: What can I do to manage the stress from losing my job? Both are critical components to well-being during unemployment. The small number of studies in the unemployment literature incorporating cognitive appraisal measures (and problem-focused and emotion-focused coping measures) are strongly suggestive of an opportunity for future researchers to more carefully map their examinations of the unemployment experience onto contemporary and generalizable theories of stress (e.g., Edwards, 1992; French, Caplan, & Van Harrison, 1982; Lazarus & Folkman, 1984).

Fourth, actively engaging in job-search activities is related to lower mental health for unemployed workers. This negative relationship reflects the stressful experience of looking for a job and facing inevitable rejections. In contrast, both other problem-focused coping strategies and emotion-focused coping were linked to higher mental health among unemployed workers. Higher levels of well-being were found among those who sought to manage their stress level directly (through problem-focused coping other than proactive job search, such as enrolling in a retraining program, seeking to relocate to an area of increased employment opportunity, reframing negative events more positively, or engaging in nonwork activities) and indirectly (through emotion-focused coping, such as distancing oneself from the job loss, devaluing one's former job, seeking social support or financial assistance, or getting involved in the community). One caveat to this conclusion is that from our data we were unable to examine whether specific forms of problem- or emotion-focused coping are more or less effective, given the small number of studies that have examined coping strategies. This difficulty is confounded by the fact that the same individual may engage multiple coping strategies in response to the same stressor (Kinicki & Latack, 1990; Kinicki et al., 2000; Leana & Feldman, 1995). Our data also did not provide information on the impact of these coping strategies on reemployment. More research is needed to determine if that which makes unem-

ployed workers feel better in the short-term improves or detracts from their chances for reemployment in high-quality jobs in the future. This is particularly important because coping is a dynamic process that changes over time (cf. Kinicki et al., 2000). Similarly, the relationship between job search and mental health may be negative in the near term, but Kanfer et al. (2001) demonstrated its positive relationship with reemployment: Job-search behavior is related to a higher likelihood of reemployment and number of job offers received and to decreased unemployment duration. This variability highlights the need for additional longitudinal research into the process of coping with job loss over time. In particular, a major contribution is available for multiwave, panel studies that follow a set of respondents over time as the job loss and unemployment experience unfolds. Researchers also need to consistently report the duration of unemployment for their particular sample.

Finally, human capital and demographic results displayed inconsistent patterns that must be interpreted with caution because of very small sample sizes and measurement inconsistencies. Of the 27 cells in the human capital and demographic section of Table 4, over two thirds (19/27) contain two or less studies; both the median and the mode for this subset is two. Even so, some interesting patterns surfaced. Among the human-capital variables, education emerged as the most often studied and strongest correlate of both mental health and life satisfaction during unemployment. Among the demographic variables, we note important findings for gender and length of unemployment. First, unemployed women displayed lower mental health and life satisfaction than their male counterparts. This finding runs counter to traditional wisdom that suggests that unemployment is more psychologically damaging to men than women. Two plausible explanations exist. It may be that gender differences reflect the general finding that women display more depression and lower mental health than men (cf. Fujita, Diener, & Sandvik, 1991). A more complex explanation centers on the changing role of women in the workplace. Recent research suggests that changing gender roles have allowed work to take a more central presence in the lives and identities of female workers (e.g., Lee & Owens, 2002; Waters & Moore, 2002a). More research is needed to tease out contributing factors to the differential impacts of unemployment on men and women. Second, although we cannot determine causality, both psychological and physical well-being seem to be lower for individuals with longer lengths of unemployment, even with very small sample sizes for life satisfaction and physical health. Moreover, moderator analysis also demonstrates that mental health differences between unemployed and employed workers are more dramatic for long-term versus short-term unemployed workers. Thus, the length of unemployment emerged as an important variable in unemployment research. Unfortunately, not all unemployment research reports the length of unemployment for the study's sample. The moderator analysis included only 13 of 60 potential studies. Future research should include information about the length of unemployment for the sample.

Taken together, this set of findings provides particular insight for future research focused on developing job-loss interventions. Specifically, it suggests that generalizing the impact of job loss according to particular demographic characteristics is not appropriate. The focus should instead be on identifying sets of individuals at risk on the basis of psychological variables. For example, those with high work-role centrality, low levels of personal coping resources, and a high degree of stress appraisals or low reemployment expectations are appropriate populations to target for specific interventions. These interventions should seek to (a) deal with the threat to personal identity, (b) bolster dislocated workers' personal coping resources, and (c) help minimize the negative appraisal of job loss. This recommendation is consistent with previous research demonstrating the effectiveness of specifically targeted interventions (e.g., Caplan, Vinokur, Price, & van Ryn, 1989; Creed, Hicks, & Machin, 1998; Eden & Aviram, 1993; Vinokur, Price, & Schul, 1995; Vinokur, Schul, Vuori, & Price, 2000) and provides a new focus for such interventions.

Research Gaps

There have clearly been many studies focused on well-being during unemployment. However, there is still a need for additional research in this area. First, future research should consider an expanded array of correlates of well-being during unemployment and develop a more complex understanding of the correlates that have been studied in terms of their role in the unemployment experience. For example, Warr (1987) proposed relationships between several environmental features (e.g., including "valued social position," a predominately unstudied feature in the job-loss domain) and well-being during unemployment. His discussion suggests that individuals may have varying preferences and needs; for example, whereas time structure may be important to one person, it may not be essential to another (see also Edwards & Cooper, 1988).

Second, research must consider non-mental-health variables as outcomes, including more attention to physical health and behavioral outcomes such as substance abuse. It is interesting to note that a recent volume on organizational stress similarly noted a dearth of research of physiological and behavioral outcomes in the job-stress literature (Cooper et al., 2001). The role of "proactive coping" in advance of actual job loss (e.g., Aspinwall & Taylor, 1997) and positive aspects of job loss that result in the long term—such as career growth and development (Latack & Dozier, 1986)—could also use more attention. We also noted a shortage of research on domain satisfaction, such as family and marital satisfaction, as outcomes of job loss.

The third issue revolves around the design and implementation of future job-loss and unemployment research. In particular, studies need to be designed to strengthen the causal inferences that can be drawn from them regarding the impact of unemployment on employee well-being. Greater emphasis must be placed on identifying and explicitly delineating variables that potentially alter the nature of this relationship. For example, simply providing the date and geographic location of data collection allows for tracking potentially critical information, such as seasonal factors that affect unemployment and well-being and the local unemployment rate. Additional variables of interest are average unemployment duration, age, and gender of the sample.

Perhaps most salient, however, is the need for more transactional research on cognitive appraisal, coping strategies, and the mediating and moderating relationships of these and other variables on well-being during unemployment. As with the coping-with-job-stress literature (Cooper et al., 2001; Kinicki, McKee, & Wade, 1996), there is not enough known about how individuals cope with job loss, how different forms of coping may be differentially helpful, and why two individuals having the same circum-

stances during job loss may appraise their situation differently. Despite the inclusion of coping variables in conceptual models of job loss and unemployment (e.g., DeFrank & Ivancevich, 1986; Latack et al., 1995; Leana & Feldman, 1988; McKee-Ryan & Kinicki, 2002), in our review we noticed a striking lack of process-oriented empirical studies. More research is needed, for example, examining coping resources leading to cognitive appraisal and coping strategies—and ultimately outcomes such as reemployment and subjective well-being, with feedback loops from well-being to coping. Time-series research with multiple assessments of these variables would be valuable, and the benefits of qualitative examinations of coping during unemployment should not be overlooked (Cooper et al., 2001; Latack et al., 1995). Refining measures of cognitive appraisal and coping-strategy constructs within the job-loss domain would also be beneficial (Cooper et al., 2001), as would further explication of the role of the coping goal (McKee-Ryan & Kinicki, 2002; Prussia et al., 2001).

Contributions and Limitations of the Study

This study contributes to the job-loss and unemployment literature in at least four important ways. First, the study reflects a comprehensive review of the unemployment literature, drawing from diverse fields of inquiry (such as economics, sociology, psychology, management, family studies, etc.) to portray the whole spectrum of research on unemployment and well-being. Second, a quantitative synthesis of available research provides a more accurate base from which to derive conclusions about the relationship between unemployment and employee well-being. This quantification allowed us to identify gaps in the literature and to suggest avenues for future research. Finally, we examined multiple outcomes of unemployment, including mental health, life satisfaction, physical health, and reemployment. Results demonstrate that the bulk of research is focused on mental health outcomes, suggesting that unemployment research needs to broaden the scope of outcome variables.

Despite the strengths of the current study, four potential limitations should be noted. A large number of articles were excluded from the analysis because they did not contain statistics that could be converted to usable statistics in the meta-analysis. Second, only studies that were published in English were included in the analysis. Third, it is imperative that readers carefully reflect on the sample sizes available for our reported meta-analyses. Some of our reported relationships must be interpreted with extreme caution given that they were based on only a few studies. Finally, as is common with meta-analytic work, we had to collapse various measures into construct categories (e.g., see Table 1). We recognize the advantage of more specific meta-analytic work being conducted as more data become available. Although these limitations should be kept in mind, the meta-analysis as a whole is a highly informative portrayal of current research on job loss and well-being.

References

References marked with an asterisk indicate studies included in the meta-analysis.

Abbey, A., Abramis, D. J., & Caplan, R. D. (1985). Effects of different sources of social support and social conflict on emotional well-being. *Basic and Applied Social Psychology, 6,* 111–129.

Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: American's perceptions of life quality.* New York: Plenum Press.

*Archer, J., & Rhodes, V. (1993). The grief process and job loss: A cross-sectional study. *British Journal of Psychology, 84,* 395–410.

*Archer, J., & Rhodes, V. (1995). A longitudinal study of job loss in relation to the grief process. *Journal of Community and Applied Social Psychology, 5,* 183–188.

Armstrong-Stassen, M. (1994). Coping with transition: A study of layoff survivors. *Journal of Organizational Behavior, 125,* 597–621.

Arthur, W., Bennett, W., & Huffcutt, A. I. (2001). *Conducting meta-analysis using SAS.* Mahwah, NJ: Erlbaum.

Ashforth, B. (2001). *Role transitions in organizational life: An identity-based perspective.* Hillsdale, NJ: Erlbaum.

Aspinwall, L. G., & Taylor, S. E. (1992). Modeling cognitive adaptation: A longitudinal investigation of the impact of individual differences and coping on college adjustment and performance. *Journal of Personality and Social Psychology, 63,* 989–1003.

Aspinwall, L. G., & Taylor, S. E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin, 121,* 417–436.

Atkinson, A. B., & Micklewright, J. (1991). Unemployment compensation and labor market transitions: A critical review. *Journal of Economic Literature, 29,* 1679–1727.

*Aubry, T., Tefft, B., & Kingsbury, N. (1990). Behavioral and psychological consequences of unemployment in blue-collar couples. *Journal of Community Psychology, 18,* 99–109.

*Baik, K., Hosseini, M., & Priesmeyer, H. R. (1989). Correlates of psychological distress in involuntary job loss. *Psychological Reports, 65,* 1227–1233.

*Bailey, E. J. (1984). Relationship of state and trait anxiety to blood pressure of Black women. *Psychological Reports, 55,* 927–931.

Banks, M. H., & Ullah, P. (1988). *Youth unemployment in the 1980s: Its psychological effect.* London: Croom Helm.

Barrera, M., Jr., & Ainlay, S. L. (1983). The structure of social support: A conceptual and empirical analysis. *Journal of Community Psychology, 11,* 133–143.

Barron, J. M., & Gilley, O. W. (1979). The effect of unemployment insurance on the search process. *Industrial and Labor Relations Review, 32,* 363–366.

Bartlett, C. A., & Ghosal, S. (2002). Building competitive advantage through people. *MIT Sloan Management Review, 43,* 34–41.

Beck, A. T., & Beck, R. W. (1972). Screening depressed patients in family practice: A rapid technique. *Postgraduate Medicine, 52,* 81–85.

Blood, M. (1969). Work values and satisfaction. *Journal of Applied Psychology, 53,* 456–459.

*Bolton, W., & Oatley, K. (1987). A longitudinal study of social support and depression in unemployed men. *Psychological Medicine, 17,* 453–460.

Bond, M. J., & Feather, N. T. (1988). Some correlates of structure and purpose in use of time. *Journal of Personality and Social Psychology, 55,* 321–329.

*Brand, H. J., & Pullen, R. C. (1991). Work-related self-concept and family relations in unemployed married men. *Psychological Reports, 68,* 1091–1096.

*Brenner, S. O., & Starrin, B. (1988). Unemployment and health in Sweden: Public issues and private troubles. *Journal of Social Issues, 44,* 125–140.

Brett, J. M., & Werbel, J. D. (1980). *The effects of job transfer on employees and their families.* Washington, DC: Employee Relocation Council.

Brief, A., Konovsky, M., Goodwin, R., & Link, K. (1995). Inferring the meaning of work from the effects of unemployment. *Journal of Applied Social Psychology, 25,* 693–711.

*Brown, D. R., & Gary, L. E. (1985). Predictors of depressive symptoms among unemployed Black adults. *Journal of Sociology and Social Welfare, 12,* 736–754.

Brown, S. P. (1996). A meta-analysis and review of organizational research on job involvement. *Psychological Bulletin, 120,* 235–255.

*Burke, R. J. (1984). The closing at Canadian Admiral: Correlates of individual well-being sixteen months after shutdown. *Psychological Reports, 55,* 91–98.

Caplan, R., Cobb, S., French, J., Harrison, R., & Pinneau, S. (1975). *Job demands and worker health: Main effects and occupational differences.* Washington, DC: U.S. Department of Health, Education, and Welfare, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health.

*Caplan, R. D., Vinokur, A. D., Price, R. H., & van Ryn, M. (1989). Job seeking, reemployment, and mental health: A randomized field experiment in coping with job loss. *Journal of Applied Psychology, 74,* 759–769.

*Cassidy, T. (1994). The psychological health of employed and unemployed recent graduates as a function of their cognitive appraisal and coping. *Counselling Psychology Quarterly, 7,* 385–397.

Catalano, R., Dooley, D., Novaco, R., Wilson, G., & Hough, R. (1993). Using ECA survey data to examine the effect of job layoffs on violent behavior. *Hospital and Community Psychiatry, 44,* 874–879.

Claussen, B. (1994). Psychologically and biochemically assessed stress in a follow-up study of long-term unemployed. *Work and Stress, 8,* 4–18.

Claussen, B. (1999). Alcohol disorders and re-employment in a 5-year follow-up of long-term unemployed. *Addiction, 94,* 133–138.

Claussen, B., Bjørndal, A., & Hjort, P. F. (1993). Health and re-employment in a two year follow up of long term unemployed. *Journal of Epidemiology Community Health, 47,* 14–18.

Cobb, S. (1974). Physiologic changes in men whose jobs were abolished. *Journal of Psychosomatic Research, 18,* 245–258.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cohn, R. M. (1978). The effect of employment status change on self-attitudes. *Social Psychology, 41,* 81–93.

Cook, T. D., & Campbell, D. T. (1976). The design and conduct of quasi-experiments and true experiments in field settings. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 223–326). Chicago: Rand McNally College.

Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings.* Chicago: Rand McNally.

Cooper, C. L., Dewe, P. J., & O'Driscoll, M. P. (2001). *Organizational stress.* Thousand Oaks, CA: Sage.

*Creed, P. A. (1999). Predisposing factors and consequences of occupational status for long-term unemployed youth: A longitudinal examination. *Journal of Adolescence, 22,* 81–93.

*Creed, P. A., Hicks, R. E., & Machin, M. A. (1998). Behavioural plasticity and mental health outcomes for long-term unemployed attending occupational training programmes. *Journal of Occupational and Organizational Psychology, 71,* 171–191.

*Creed, P. A., Machin, M. A., & Hicks, R. (1996). Neuroticism and mental health outcomes for long-term unemployed youth attending occupational skills training programs. *Personality and Individual Differences, 21,* 537–544.

*Creed, P. A., Machin, M. A., & Hicks, R. E. (1999). Improving mental health status and coping abilities for long-term unemployed youth using cognitive–behaviour therapy based training interventions. *Journal of Organizational Behavior, 20,* 963–978.

*Creed, P. A., & Macintyre, S. R. (2001). The relative effects of deprivation of the latent and manifest benefits of employment on the well-being of unemployed people. *Journal of Occupational Health Psychology, 6,* 324–331.

*Creed, P. A., Muller, J., & Machin, M. A. (2001). The role of satisfaction with occupational status, neuroticism, financial strain and categories of experience in predicting mental health in the unemployed. *Personality & Individual Differences, 30,* 435–447.

*Creed, P. A., & Reynolds, J. (2001). Economic deprivation, experiential deprivation and social loneliness in unemployed and employed youth. *Journal of Community & Applied Social Psychology, 11,* 167–178.

*Crepet, P., Piazzi, A., Vetrone, G., & Costa, M. (1993). Effects of occupational status on the mental health of young Italian men and women: A cross-sectional study. *International Journal of Social Psychiatry, 39,* 303–312.

Cutrona, C. E., & Russell, D. W. (1988). The provisions of social relationships and adaptation to stress. In W. H. Jones & D. Perlman (Eds.), *Advances in personal relationships* (Vol. 1, pp. 37–67). Greenwich, CT: JAI Press.

*Cvetanovski, J., & Jex, S. M. (1994). Locus of control of unemployed people and its relationship to psychological and physical well-being. *Work and Stress, 8,* 60–67.

DeFrank, R. S., & Ivancevich, J. M. (1986). Job loss: An individual level review and model. *Journal of Vocational Behavior, 28,* 1–20.

Derogatis, L. R., Lipmann, R. S., Rickels, K., Uhlenhuth, E. H., & Covi, L. (1974). The Hopkins Symptom Checklist (HSCL): A measure of primary symptom dimensions. In P. Pichot (Ed.), *Psychological measurements in psychopharmacology: Vol. 7. Modern problems in psychopsychiatry* (pp. 79–110). Basel, Switzerland: Karger.

Diener, E., & Diener, C. (1995). The wealth of nations revisited: Income and quality of life. *Social Indicators Research, 36,* 275–286.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment, 49,* 71–75.

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125,* 276–302.

*Donovan, A., & Oddy, M. (1982). Psychological aspects of unemployment: An investigation into the emotional and social adjustment of school leavers. *Journal of Adolescence, 5,* 15–30.

*Donovan, A., Oddy, M., Pardoe, R., & Ades, A. (1986). Employment status and psychological well-being: A longitudinal study of 16-year-old school leavers. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 27,* 65–76.

Dooley, D., & Catalano, R. (1984). The epidemiology of economic stress. *American Journal of Community Psychology, 12,* 387–409.

Dooley, D., & Catalano, R. (1988). Recent research on the psychological effects of unemployment. *Journal of Social Issues, 44*(4), 1–12.

Dooley, D., Catalano, R., & Rook, K. S. (1988). Personal and aggregate unemployment and psychological symptoms. *Journal of Social Issues, 44*(4), 107–123.

Eden, D., & Aviram, A. (1993). Self-efficacy training to speed reemployment: Helping people to help themselves. *Journal of Applied Psychology, 78,* 352–360.

Edwards, J. R. (1992). A cybernetic theory of stress, coping, and well-being in organizations. *Academy of Management Review, 17,* 238–274.

Edwards, J. R., & Cooper, C. L. (1988). Research in stress, coping, and health: Theoretical and methodological issues. *Psychological Medicine, 18,* 15–20.

Elvira, M. M., & Zatzick, C. D. (2002). Who's displaced first? The role of race in layoff decisions. *Industrial Relations, 41,* 329–361.

*Ensminger, M. E., & Celentano, D. (1988). Unemployment and psychiatric distress: Social resources and coping. *Social Science and Medicine, 27,* 239–247.

Erez, A., & Judge, T. A. (2001). Relationship of core self-evaluations to goal setting, motivation, and performance. *Journal of Applied Psychology, 6,* 1270–1279.

Eysenck, H. J., & Eysenck, S. B. G. (1991). *Manual of the Eysenck Personality Scales (EPS–Adult).* London: Hodder & Stoughton Educational.

*Feather, N. T. (1989). Reported changes in behaviour after job loss in a sample of older unemployed men. *Australian Journal of Psychology, 41,* 175–185.

*Feather, N. T., & Barber, J. G. (1983). Depressive reactions and unemployment. *Journal of Abnormal Psychology, 92,* 185–195.

*Feather, N. T., & Bond, M. J. (1983). Time structure and purposeful activity among employed and unemployed university graduates. *Journal of Occupational Psychology, 56,* 241–254.

Feather, N., & Bond, M. (1994). Structure and purpose in the use of time. *Psychology of Future Orientation, 32,* 121–140.

*Feather, N. T., & Davenport, P. R. (1981). Unemployment and depressive affect: A motivational and attributional analysis. *Journal of Personality and Social Psychology, 41,* 422–436.

Feather, N, & O'Brien, G. (1986). A longitudinal study of the effects of employment and unemployment on school-leavers. *Journal of Occupational Psychology, 59,* 121–144.

Feldman, D. C. (1996). The nature, antecedents and consequences of underemployment. *Journal of Management, 22,* 385–407.

Feldman, D. C., Leana, C. R., & Bolino, M. C. (2002). Underemployment and relative deprivation among re-employed executives. *Journal of Occupational & Organizational Psychology, 75,* 453–471.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology, 50,* 992–1103.

French, J. R. P., Jr., Caplan, R. D., & Van Harrison, R. (1982). *The mechanisms of job stress and strain.* Chichester, England: Wiley.

*Frost, T. F., & Clayson, N. E. (1991). The measurement of self-esteem, stress-related life events, and locus of control among unemployed and employed blue-collar workers. *Journal of Applied Social Psychology, 21,* 1402–1417.

Fujita, F., Diener, E., & Sandvik, E. (1991). Gender differences in negative affect and well-being: The case for emotional intensity. *Journal of Personality and Social Psychology, 61,* 427–434.

*Furnham, A. (1983). Mental health and employment status: A preliminary study. *British Journal of Guidance and Counselling, 11,* 197–201.

Gallo, W., Bradley, E., Siegel, M., & Kasl, S. (2000). Health effects of involuntary job loss among older workers: Findings from the health and retirement survey. *Journals of Gerontology: Series B—Psychological Sciences and Social Sciences, 55b,* S131–S140.

*Ginexi, E. M., Howe, G. W., & Caplan, R. D. (2000). Depression and control beliefs in relation to reemployment: What are the directions of effect? *Journal of Occupational Health Psychology, 5,* 323–336.

Goldberg, D. P. (1972). *The detection of psychiatric illness by questionnaire.* London: Oxford University Press.

Goldberg, D. P. (1978). *Manual of the General Health Questionnaire.* Windsor: NFER-NELSON.

Gore, S. (1978). The effect of social support in moderating the health consequences of unemployment. *Journal of Health and Social Behaviour, 19,* 157–165.

*Gowan, M. A., Riordan, C. M., & Gatewood, R. D. (1999). Test of a model of coping with involuntary job loss following a company closing. *Journal of Applied Psychology, 84,* 75–86.

*Graetz, B. (1993). Health consequences of employment and unemployment: Longitudinal evidence for young men and women. *Social Science and Medicine, 36,* 715–724.

Grossi, G., Ahs, A., & Lundberg, U. (1998). Psychological correlates of salivary cortisol secretion among unemployed men and women. *Integrative Physiological and Behavioral Science, 33,* 249–263.

Guzzo, R. A., Jackson, S. E., & Katzell, R. A. (1987). Meta-analysis analysis. *Research in Organizational Behavior, 9,* 407–442.

*Halford, W. K., & Learner, E. (1984). Correlates of coping with unemployment in young Australians. *Australian Psychologist, 19,* 333–344.

*Hall, E. M., & Johnson, J. V. (1988). Depression in unemployed Swedish women. *Social Science and Medicine, 27,* 1349–1355.

Hammarström, A., & Janlert, U. (2002). Early unemployment can contribute to adult health problems: Results from a longitudinal study of school leavers. *Journal of Epidemiology and Community Health, 56,* 624–630.

Hanisch, K. A. (1999). Job loss and unemployment research from 1994 to 1998: A review and recommendations for research and intervention. *Journal of Vocational Behavior, 55,* 188–220.

*Haworth, J. T., Chesworth, P., & Smith, P. (1990). Research note: Cognitive difficulties in samples of unemployed, middle-aged men. *Leisure Studies, 9,* 253–257.

Hedges, L. V., & Olkin, I. (1985). *Statistical methods for meta-analysis.* Orlando, FL: Academic Press.

*Hepworth, S. J. (1980). Moderating factors of the psychological impact of unemployment. *Journal of Occupational Psychology, 53,* 139–146.

Hobfoll, S., Freedy, J., Green, B., & Solomon, S. (1996). Coping in reaction to extreme stress: The roles of resource loss and resource availability. In M. Zeidner & N. Endler (Eds.), *Handbook of coping: Theory, research, applications* (pp. 322–349). New York: Wiley.

Hom, P. J., & Kinicki, A. J. (2001). Toward a greater understanding of how dissatisfaction drives employee turnover. *Academy of Management Journal, 44,* 975–987.

Huang, L., & Perrucci, C. C. (1994). Changes in spousal decision-making among displaced workers. *Humboldt Journal of Social Relations, 20,* 121–135.

Huffcutt, A. I., Conway, J. M., Roth, P. L., & Stone, N. J. (2001). Identification and meta-analytic assessment of psychological constructs measured in employment interviews. *Journal of Applied Psychology, 86,* 897–913.

Hunter, J. E., & Schmidt, F. L. (1990). *Methods of meta-analysis: Correcting error and bias in research findings.* Newbury Park, CA: Sage.

Ilg, R. E. (1994). Long-term unemployment in recent recessions. *Monthly Labor Review, 117*(6), 12–15.

International Labour Organization. (2000). *World Labour Report 2000: Income security and social protection in a changing world.* Geneva, Switzerland: Author.

*Isaksson, K. (1990). A longitudinal study of the relationship between frequent job change and psychological well-being. *Journal of Occupational Psychology, 63,* 297–308.

*Iversen, L., & Sabroe, S. (1988). Psychological well-being among unemployed and employed people after a company closedown: A longitudinal study. *Journal of Social Issues, 44,* 141–152.

*Jackson, P. R., Stafford, E. M., Banks, M. H., & Warr, P. B. (1983). Unemployment and psychological distress in young people: The moderating role of employment commitment. *Journal of Applied Psychology, 68,* 525–535.

*Jackson, P. R., & Warr, P. B. (1984). Unemployment and psychological ill-health: The moderating role of duration and age. *Psychological Medicine, 14,* 605–614.

*Jackson, T. (1999). Differences in psychosocial experiences of employed, unemployed, and student samples of young adults. *Journal of Psychology, 133,* 49–60.

*Jackson, T., Iezzi, A., Lafreniere, K., & Narduzzi, K. (1998). Relations of employment status to emotional distress among chronic pain patients: A path analysis. *Clinical Journal of Pain, 14,* 55–60.

Jahoda, M. (1979). The impact of unemployment in the 1930s and the 1970s. *Bulletin of the British Psychological Society, 32,* 309–314.

Jahoda, M. (1982). *Employment and unemployment: A social psychological analysis.* New York: Cambridge University Press.

James, L. A., & James, L. R. (1989). Integrating work environment perceptions: Explorations into the measurement of meaning. *Journal of Applied Psychology, 74,* 739–751.

*Jex, S. M., Cvetanovski, J., & Allen, S. J. (1994). Self-esteem as a moderator of the impact of unemployment. *Journal of Social Behavior & Personality, 9,* 69–80.

Jin, R. L., Shah, C. P., & Svoboda, T. J. (1995). The impact of unemployment on health: A review of the evidence. *Canadian Medical Association Journal, 153,* 529–540.

*Jones, L. P. (1991). Unemployment: The effect on social networks,

depression, and reemployment opportunities. *Journal of Social Service Research, 15,* 1–22.

Jones, L. (1991–1992). Specifying the temporal relationship between job loss and consequences: Implications for service delivery. *Journal of Applied Social Science, 16,* 37–62.

Judge, T. A., & Bono, J. E. (2001). The relationship of core self-evaluations traits—Self-esteem, generalized self-efficacy, locus of control, and emotional stability—With job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology, 86,* 80–92.

Judge, T. A., Locke, E. A., & Durham C. C. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior, 19,* 151–188.

Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology, 83,* 17–34.

*Kaabe, H., Setterlind, S., & Svensson, P. G. (1996). Fired managers: Experiences from their own unemployment. *International Journal of Stress Management, 3,* 239–253.

Kanfer, R., Wanberg, C. R., & Kantrowitz, T. M. (2001). Job search and employment: A personality-motivational analysis and meta-analytic review. *Journal of Applied Psychology, 86,* 837–855.

Kanungo, R. N. (1982). Measurement of job and work involvement. *Journal of Applied Psychology, 67,* 341–349.

*Kemp, N. J., & Mercer, A. (1983). Unemployment, disability and rehabilitation centres and their effects on mental health. *Journal of Occupational Psychology, 56,* 37–48.

Kessler, R. C., Turner, J. B., & House, J. S. (1987). Intervening processes in the relationship between unemployment and health. *Psychological Medicine, 17,* 949–961.

Kessler, R. C., Turner, J. B., & House, J. S. (1989). Unemployment, reemployment, and emotional functioning in a community sample. *American Sociological Review, 54,* 648–657.

Kinicki, A. J. (1989). Predicting occupational role choices after involuntary job loss. *Journal of Vocational Behavior, 35,* 204–218.

*Kinicki, A. J., & Latack, J. C. (1990). Explication of the construct of coping with involuntary job loss. *Journal of Vocational Behavior, 36,* 339–360.

Kinicki, A. J., McKee, F. M., & Wade, K. J. (1996). Annual Review, 1991–1995: Occupational health. *Journal of Vocational Behavior, 49,* 190–220.

Kinicki, A. J., McKee-Ryan, F. M., Schriesheim, C. A., & Carson, K. P. (2002). Assessing the construct validity of the job descriptive index: A review and meta-analysis. *Journal of Applied Psychology, 87,* 14–32.

*Kinicki, A. J., Prussia, R. E., & McKee-Ryan, F. M. (2000). A panel study of coping with involuntary job loss. *Academy of Management Journal, 43,* 90–100.

Kisch, A. I., Kovner, J. W., Harris, L. J., & Kline, G. (1969). A new proxy measure for health status. *Health Services Research, 4,* 223–230.

*Kokko, K., & Pulkkinen, L. (1998). Unemployment and psychological distress: Mediator. *Journal of Adult Development, 5,* 205–217.

Kunzmann, U., Little, T. D., & Smith, J. (2000). Is age-related stability of subjective well-being a paradox? Cross-sectional and longitudinal evidence from the Berlin Aging Study. *Psychology and Aging, 15,* 511–526.

*Lai, J. C. L., & Chan, R. K. H. (2002). The effects of job-search motives and coping on psychological health and re-employment: A study of unemployed Hong Kong Chinese. *The International Journal of Human Resource Management, 13,* 465–483.

*Lai, J. C. L., Chan, R. K. H., & Luk, C. L. (1997). Unemployment and psychological health among Hong Kong Chinese women. *Psychological Reports, 81,* 499–505.

*Lai, J. C. L., & Wong, W. S. (1998). Optimism and coping with unemployment among Hong Kong Chinese women. *Journal of Research in Personality, 32,* 454–479.

*Larson, J. H. (1984). The effect of husband's unemployment on marital and family relations in blue-collar families. *Family Relations: Journal of Applied Family and Child Studies, 33,* 503–511.

Latack, J. C., & Dozier, J. B. (1986). After the ax falls: Job loss as a career transition. *Academy of Management Review, 11,* 375–392.

Latack, J., & Havlovic, S. (1992). Coping with job stress: A conceptual evaluation framework for coping measures. *Journal of Organizational Behavior, 13,* 479–508.

Latack, J. C., Kinicki, A. J., & Prussia, G. E. (1995). An integrative process model of coping with job loss. *Academy of Management Review, 20,* 311–342.

*Layton, C. (1986). Change-score analyses on the GHQ and derived subscales for male school-leavers with subsequent differing work status. *Personality and Individual Differences, 7,* 419–422.

*Layton, C. (1987). Levels of state anxiety for males facing redundancy and subsequently reporting to be employed or unemployed. *Perceptual and Motor Skills, 65,* 53–54.

Lazarus, R., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer.

Leana, C. R., & Feldman, D. C. (1988). Individual responses to job loss: Perceptions, reactions, and coping behaviors. *Journal of Management, 14,* 375–389.

Leana, C. R., & Feldman, D. C. (1990). Individual responses to job loss: Empirical findings from two field studies. *Human Relations, 43,* 1155–1181.

*Leana, C. R., & Feldman, D. C. (1991). Gender differences in responses to unemployment. *Journal of Vocational Behavior, 38,* 65–77.

Leana, C. R., & Feldman, D. C. (1992). *Coping with job loss: How individuals, organizations, and communities respond to layoffs.* New York: Lexington Books.

Leana, C. R., & Feldman, D. C. (1994). The psychology of job loss. In G. R. Ferris (Ed.), *Research in personnel and human resources management* (pp. 271–302). Greenwich, CT: JAI Press.

Leana, C. R., & Feldman, D. C. (1995). Finding new jobs after a plant closing: Antecedents and outcomes of the occurrence and quality of reemployment. *Human Relations, 48,* 1381–1401.

Lee, C., & Owens, R. G. (2002). Men, work, and gender. *Australian Psychologist, 37,* 13–19.

*Linn, M. W., Sandifer, R., & Stein, S. (1985). Effects of unemployment on mental and physical health. *American Journal of Public Health, 75,* 502–506.

Lucas, R. E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology, 71,* 616–628.

*Macky, K. A. (1984). Unemployed school leavers: Their mental health and work involvement. *Community Mental Health in New Zealand, 1,* 40–45.

*Mallinckrodt, B., & Bennett, J. (1992). Social support and the impact of job loss in dislocated blue-collar workers. *Journal of Counseling Psychology, 39,* 482–489.

*Mallinckrodt, B., & Fretz, B. R. (1988). Social support and the impact of job loss on older professionals. *Journal of Counseling Psychology, 35,* 281–286.

Mastekaasa, A. (1996). Unemployment and health: Selection effects. *Journal of Community & Applied Social Psychology, 6,* 189–205.

McKee-Ryan, F. M., & Kinicki, A. J. (2002). Coping with job loss: A life-facet model. *International Review of Industrial and Organizational Psychology, 17,* 1–29.

Miller, M. V., & Hoppe, S. K. (1994). Attributions for job termination and psychological distress. *Human Relations, 47,* 307–327.

*Morrison, T. G., O'Connor, W. E., Morrison, M. A., & Hill, S. A. (2001). Determinants of psychological well-being among unemployed women and men. *Psychology & Education: An Interdisciplinary Journal, 38,* 34–41.

Moss, P., & Tilly, C. (2001). Why opportunity isn't knocking: Racial inequality and the demand for labor. In A. O'Connor, C. Tilly, and L. D.

Bobo (Eds.), *Urban inequality* (pp. 444–495). New York: Russell Sage Foundation.

Murphy, G. C., & Athanasou, J. A. (1999). The effect of unemployment on mental health. *Journal of Occupational and Organizational Psychology, 72,* 83–99.

Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science, 6*(1), 10–19.

*Najam, N., Ashraf, R., Nasreen, S., Bashir, S., & Khan, S. (1995). Psychological effects of unemployment: Sex differences. *Journal of Behavioural Sciences, 6–7,* 37–47.

O'Brien, G. (1986). *Psychology of work and unemployment.* Chichester, England: Wiley.

*Ockenfels, M. C., Porter, L., Smyth, J., Kirschbaum, C., Hellhammer, D. H., & Stone, A. A. (1995). Effect of chronic stress associated with unemployment on salivary cortisol: Overall cortisol levels, diurnal rhythm, and acute stress reactivity. *Psychosomatic Medicine, 57,* 460–467.

Osburn, H., & Callender, J. (1992). A note on the sampling variance of the mean uncorrected correlation in meta-analysis and validity generalization. *Journal of Applied Psychology, 77,* 115–122.

Ouweneel, P. (2002). Social security and well-being among the unemployed in 42 nations. *Journal of Happiness Studies, 3,* 167–192.

Ouweneel, P., & Veenhoven, R. (1995). Livability of the welfare state. *Social Indicators Research, 36,* 1–48.

*Patterson, L. J. M. (1997). Long-term unemployment amongst adolescents: A longitudinal study. *Journal of Adolescence, 20,* 261–280.

*Payne, R. (1988). A longitudinal study of the psychological well-being of unemployed men and the mediating effect of neuroticism. *Human Relations, 41,* 119–138.

*Payne, R., & Hartley, J. (1987). A test of a model for explaining the affective experience of unemployed men. *Journal of Occupational Psychology, 60,* 31–47.

Payne, R. L., Warr, P. B., & Hartley, J. (1984). Social class and the experience of unemployment. *Sociology of Health and Illness, 6,* 151–174.

Pearlin, L. I., & Radabaugh, C. W. (1976). Economic strains and the coping functions of alcohol. *Journal of Sociology, 82,* 652–663.

Pinquart, M. (2001). Correlates of subjective health in older adults: A meta-analysis. *Psychology and Aging, 16,* 414–426.

Pinquart, M., & Sörensen, S. (2000). Influences of socioeconomic status, social network, and competence on subjective well-being in later life: A meta-analysis. *Psychology and Aging, 15,* 187–224.

Platt, S. (1984). Unemployment and suicidal behavior: A review of the literature. *Social Science and Medicine, 19,* 93–115.

*Platt, S. D., & Dyer, J. A. T. (1987). Psychological correlates of unemployment among male parasuicides in Edinburgh. *British Journal of Psychiatry, 151,* 27–32.

*Prause, J., & Dooley, D. (2001). Favourable employment status change and psychological depression: A two-year follow-up analysis of the national longitudinal survey of youth. *Applied Psychology: An International Review, 50,* 282–304.

Price, R. H., & Fang, L. (2002). Unemployed Chinese workers: The survivors, the worried young, and the discouraged old. *International Journal of Human Resource Management, 13,* 416–430.

Price, R. H., Friedland, D. S., & Vinokur, A. D. (1998). Job loss: Hard times and eroded identity. In J. H. Harvey (Ed.), *Perspectives on loss: A sourcebook* (pp. 303–316). Philadelphia: Taylor & Francis.

*Prussia, G. E., Fugate, M., & Kinicki, A. J. (2001). Explication of the coping goal construct: Implications for coping and reemployment. *Journal of Applied Psychology, 86,* 1179–1190.

Prussia, G. E., Kinicki, A. J., & Bracker, J. S. (1993). Psychological and behavioral consequences of job loss: A covariance structure analysis using Weiner's (1985) attribution model. *Journal of Applied Psychology, 78,* 382–397.

Quinn, R., & Shepard, L. (1974). *The 1972–3 Quality of Employment Survey.* Ann Arbor, MI: Survey Research Center, University of Michigan.

Radloff, L. (1977). The CES–D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1,* 385–401.

Rasky, E., Stronegger, W. J., & Freidl, W. (1996). Employment status and its health-related effects in rural Styria, Austria. *Preventive Medicine, 25,* 757–763.

*Reynolds, S., & Gilbert, P. (1991). Psychological impact of unemployment: Interactive effects of vulnerability and protective factors on depression. *Journal of Counseling Psychology, 38,* 76–84.

*Rife, J. C. (1989). Depression, job search self-efficacy, and the unemployed older adult. *Clinical Gerontologist, 8,* 43–45.

*Rife, J. C. (1990). Social support and depression among older unemployed workers. *Clinical Gerontologist, 10,* 42–45.

*Rife, J. C., & First, R. J. (1989). Discouraged older workers: An exploratory study. *International Journal of Aging and Human Development, 29,* 195–203.

*Rodriguez, E., Frongillo, E. A., & Chandra, P. (2001). Do social programmes contribute to mental well-being? The long-term impact of unemployment on depression in the United States. *International Journal of Epidemiology, 30,* 163–170.

Rosenberg, M. (1965). *Society and adolescent self-image.* Princeton, NJ: Princeton University Press.

Rotter, J. B. (1966). Generalized expectancies for internal vs. external control of reinforcement. *Psychological Monographs, 1* (Whole No. 609).

*Rowley, K. M., & Feather, N. T. (1987). The impact of unemployment in relation to age and length of unemployment. *Journal of Occupational Psychology, 60,* 323–332.

Sales, E. (1995). Surviving unemployment: Economic resources and job loss duration in blue-collar households. *Social Work, 40,* 483–491.

Sarason, I. G., Levine, H. M., Basham, R. B., & Sarason, B. R. (1983). Assessing social support: The Social Support Questionnaire. *Journal of Personality and Social Psychology, 44,* 127–139.

*Schaufeli, W. B., & van Yperen, N. W. (1992). Unemployment and psychological distress among graduates: A longitudinal study. *Journal of Occupational and Organizational Psychology, 65,* 291–305.

*Schaufeli, W. B., & van Yperen, N. W. (1993). Success and failure in the labour market. *Journal of Organizational Behavior, 14,* 559–572.

Scheier, M., & Carver, C. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4,* 219–247.

Schwarzer, R., Jerusalem, M., & Hahn, A. (1994). Unemployment, social support and health complaints: A longitudinal study of stress in East German refugees. *Journal of Community and Applied Social Psychology, 4,* 31–45.

*Shamir, B. (1986). Self-esteem and the psychological impact of unemployment. *Social Psychology Quarterly, 49*(1), 61–72.

*Shams, M. (1993). Social support and psychological well-being among unemployed British Asian men. *Social Behavior and Personality, 21,* 175–186.

*Shams, M., & Jackson, P. R. (1994). The impact of unemployment on the psychological well-being of British Asians. *Psychological Medicine, 24,* 347–355.

Sherbourne, C. D., Allen, H., Kamberg, C., & Wells, K. B. (1992). Physical/psychophysiologic symptoms measure. In A. L. Stewart & J. E. Ware (Eds.), *Measuring functioning and well-being: The medical outcomes study approach* (pp. 260–276). Durham, NC: Duke University Press.

Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research, 5,* 475–492.

*Siegert, R. J., Chi-Ying, C. R., & Taylor, A. J. W. (1990). Unemploy-