

Factors Facilitating Adjustment to Unemployment: Implications for Intervention¹

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Conducted a community survey in the Fall of 1984 in a sample of high unemployment blue-collar census tracts in southeastern Michigan. Results of earlier analyses using these data showed that involuntarily unemployed workers had significantly elevated levels of depression, anxiety, somatization, and self-reported physical illness relative to a stably employed comparison group (Kessler, House, & Turner, 1987). Results presented in this paper document that this relationship is modified by social support (as measured by social integration and the availability of a confidant), self-concept, and various coping processes. Further analyses allowed us to determine the way in which these modifiers operate. The modifying effects of social support and coping operate primarily by buffering the impact of unemployment-related financial strain on the health outcomes. Self-concept operates primarily by attenuating vulnerability to other stressful life events. The implications of these results for the design and implementation of preventive interventions are discussed.

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Researchers who study the effects of stress on health typically do so in the context of population surveys and/or secondary analyses of archived morbidity or mortality data. This type of study usually examines a wide range of risk factors, as well as a variety of variables that may mediate or modify the relationship between stress and health. Sometimes this is done with a specific hypothesis in mind but just as often investigators search in an exploratory way for evidence of an association. In either case, the purpose is primarily to advance theory on the nature of the stress–health relationship. Implicitly, it is hoped that the information gained will eventually be of use to practitioners. Yet it is very rare for stress researchers to develop their studies with an explicit eye toward interventions, and rarer still for the findings from these studies to be used as the basis for intervention development.

The study described here is an exception. In 1984 we were asked to conduct a community survey to assess the service needs of blue-collar workers who lost their jobs in the Detroit Metropolitan area during the recession of the early 1980s. This assessment was to be used as background information for an intervention program being conducted by the Michigan Prevention and Intervention Research Center (MPIRC). This intervention was intended to facilitate effective job searching among the participants and to prevent deterioration in mental health over the unemployment period (see Vinokur, Price, & Caplan, 1991). We collected data on three employment status subgroups: currently unemployed, previously unemployed, and stably employed. Comparisons among these subgroups were made to estimate the health-damaging effects of unemployment.

Because our results were to inform intervention efforts, the survey had two additional purposes. One was to evaluate the health-promoting effects of reemployment. In an earlier paper (Kessler, Turner, & House, 1989), we were able to document dramatic reductions in levels of depression and somatic symptoms of distress among initially unemployed people who had regained work in the year between the two waves of our study. In fact, the levels of psychological distress among these recently reemployed people were no higher, on average, than the levels among our stable employed control group. This was an encouraging finding given the intervention's emphasis on job search skills and motivation to seek reemployment (Caplan, Vinokur, Price, & van Ryn, 1989).

Another purpose of the intervention, however, was to prevent marked declines in mental health over the period that the individual was without work. For this reason, we also attempted in our survey to identify various types of personal and social resources that might act to attenuate the distressing effects of unemployment. The focus of this paper is on the analyses of these modifying influences, and on the implications of our results for preventative interventions directed at jobless workers.

BACKGROUND

Despite the large amount of research on the physical and psychological effects of unemployment (e.g., Brenner, 1973; Catalano & Dooley, 1983; Cobb & Kasl, 1977; Grayson, 1985; Warr, 1984), only a very small part of this literature has focused on personal and social coping resources. Social support has received the most attention in this regard. The first group of researchers to study this issue were Kasl and Cobb. In a longitudinal study of workers who were victims of a plant closing these researchers found that the impact of unemployment on both physical illness and depression was attenuated by high levels of perceived social support. In fact, elevated levels of psychological distress appeared only among workers who experienced low levels of social support (Gore, 1978; Kasl & Cobb, 1979).

Subsequent evidence for the importance of social support came from the work of Bolton and Oatley (1987), who found that frequent social contact with family and friends outside of working hours, during the month prior to job loss, buffered the impact of this event on later levels of depression. They speculated that, because losing a job involves losing a major arena for social interaction, those who are without an alternative source are more adversely affected by the experience. Dooley, Catalano, Jackson, and Brownell (1981) noted that the greater satisfaction with social relationships reported by unemployed individuals in nonmetropolitan communities may account for the lower levels of distress in this group compared to the metropolitan unemployed. Contrasting findings come from a panel study conducted in the Chicago area by Pearlin, Lieberman, Menaghan, and Mullan (1981). These researchers found no evidence that social support modifies the relationship between disruptive job events (including being downgraded and having to leave work due to illness, in addition to being fired or laid off) and subsequent depression.

Other potential buffers of the unemployment experience have received far less attention. Self-esteem, for example, has been considered almost solely as an outcome variable on which unemployment has a negative impact and seldom as a resource that could play a part in adjustment to job loss. Interestingly, most studies that have tried to find an effect of job loss on self-esteem have failed to do so (e.g., Cobb & Kasl, 1977; Hartley, 1980). Failing himself to find a relationship between unemployment and reductions in self-esteem, Shamir (1986) speculated that the negative impact of unemployment on psychological well-being might be *modified* by self-esteem. This is in fact what he found—the experience of unemployment had a far more devastating impact in his sample on individuals with low self-esteem than on those with levels of self-esteem in the middle and upper ranges.

Pearlin et al. (1981) examined two coping processes thought to be particularly relevant to the experience of disruptive job events. One of these involves comparisons individuals make of their economic situation to situations of other people who are worse off financially, to worse situations they experienced in the past, or to better situations they hope to experience in the future. The other coping strategy involves the cognitive devaluation of economic achievements. The findings of Pearlin and his colleagues demonstrate that these processes do in fact buffer the impact of job disruption on depression, and also appear to reduce the subjectively experienced economic strain associated with job loss.

Many studies report that the unemployed who experience the greatest financial strain are those who exhibit the poorest mental health (e.g., Aiken, Ferman, & Sheppard, 1968; Schwefel, John, Potthoff, & Hechler, 1984). This implies that other sources of income or liquid assets might soften the impact of job loss. Little (1976) found that when no immediate financial problem arises as the result of job loss, unemployment is often seen as an opportunity for a welcome career change. In general, however, surprisingly little has been done to investigate the ameliorative effects of extra financial resources on the health impact of unemployment.

Among those without extra financial resources to fall back on, the accessibility of public assistance might be crucial. Schwefel et al. (1984), failed in West Germany to replicate Brenner's (1973) finding of an association between aggregate unemployment rates and symptoms of ill health. He suggested that this is because West Germany's social welfare "safety net" provides greater protection against economic distress than does the system in the United States. No other investigations of joblessness, however, have seriously evaluated the effects of public assistance programs on emotional adjustment.

The available information on the factors that modify the health-damaging effects of unemployment is far from extensive and, as this overview of the literature suggests, quite fragmented. Part of the difficulty in pinning down the relevant resources may come from the lack of attention generally paid to the actual consequences of unemployment with which the individual is forced to contend. It has been suggested that individuals do not adjust to stressful events *per se*, but rather to the stresses and strains that the events cause or exacerbate (Pearlin et al., 1981). Furthermore, as Brown and Harris (1978) noted, individuals vary considerably in the meaning a given life event has for them. Thus, it seems important to identify the contextual features of job loss that account for its effect. In this paper we examine potential modifiers of the relationship between unemployment and health in the context of what we have come to believe, from previous analyses, are the stresses and strains most salient to the unemployment experi-

ence—the ones unemployed individuals must cope with to avoid the negative health consequences of job loss.

DATA AND METHODS

Sample

Respondents in this study were selected from a multistage probability sample of 14 contiguous census tracts with high unemployment rates in southeastern Michigan.³ The total sample comprised three subgroups: *currently unemployed* people who had lost a full-time job during the recession of 1981–1985, *previously unemployed* people who had lost a job during this same period but were reemployed at the time of interview, and *stably employed* people who had not lost a job during this period. The currently and previously unemployed were oversampled so as to select roughly equal numbers of respondents in each of the three groups. The conditional selection probabilities used in this procedure were 1 for the currently unemployed, 0.833 for the previously unemployed, and 0.262 for the stably employed. These yielded subsamples of 146 currently unemployed, 162 previously unemployed, and 184 stably employed respondents. (For more details on the sampling frame and selection procedures, see House, Williams, & Kessler, 1985.)

The sample reflects the demographic composition of the largely blue-collar population in this geographic area. The mean education of respondents was 12 years. They were 60% male, 20% black, 50% married, and averaged 35 years of age at the time of baseline interview. They generally shared an intense interest in the economic situation in their labor market and readily agreed to face-to-face interviews in their homes. Their cooperativeness is indicated by the 90% response rate among currently unemployed and 78% response rate among currently employed predesignated respondents.

Measures

The measures used in these analyses can be divided into three categories: (a) the illness outcome measures; (b) the stresses that unemployment either causes or to which unemployment makes the individual more

³An attempt was made to choose the census tracts with the highest rates of unemployment, within a target area known to be experiencing high unemployment levels, while maintaining geographic contiguity between the tracts. The unemployment rates in the 14 tracts ranged in the fall of 1984, from 7.5 to 31.5%. The overall unemployment rate for the selected tracts was 13.3%.

vulnerable; and (c) the personal and social resources that might modify the effects of these stresses on the illness outcomes.

Illness Outcomes

Three mental health indicators and one measure of perceived physical health were used in these analyses. The mental health indicators are the anxiety, depression, and somatization subscales of the SCL-90 (Derogatis, 1977). The reliabilities of these scales for our sample are .80 for anxiety, .90 for depression, and .85 for somatization. (All reliabilities reported as Cronbach's alpha, 1951.) The physical health measure is a four-item index of self-evaluated physical health modified from standard questions asked in surveys by the National Center for Health Statistics (e.g., NCHS, 1981). Individuals were asked for a general evaluation of their health, if they had any particular health problems, how much their health restricted them from doing things they wanted to do during the preceding 3 months, and whether they currently felt healthy enough to do the things they wanted. The reliability of this scale for our sample is .69.

Associated Stresses

Only those stresses found relevant in previous analyses of the same sample (Kessler, Turner, & House, 1987) were used in the analyses reported in this paper. Financial strain was measured in our survey using a six-item index developed by Pearlin et al. (1981). This index consists of concrete questions about financial constraints on buying adequate amounts of food, clothing, and medical care, and questions on whether there is enough money to cover the basic bills each month. The internal consistency reliability of this scale is .78. The other stress variable considered was the occurrence of nonfinancial life events. A list of 24 events was used, consisting mostly of problems with health and interpersonal relationships.

Buffering Resources

We considered four types of buffering resources in these analyses: social support, self-concept, coping processes, and financial resources. Based primarily on the work cited earlier, we worked with seven different measures of social support. These included marital status (an indirect measure of support availability), access to an intimate confiding relationship, and a measure of integration into affiliative networks. This last measure

consists of a series of three questions asking respondents how often they had different types of informal contact with neighbors, friends, or relatives. The remaining four indicators were scales measuring perceived availability of crisis support from friends, relatives, co-workers, and, among married people, from one's spouse. These scales consisted of questions dealing with both instrumental support (e.g., "How much could you rely on friends to lend you money if you needed it?") and emotional support (e.g., "How much would your spouse encourage and reassure you if you needed it?"). Possible responses ranged from *a great deal* to *not at all*. Internal reliabilities for these scales ranged between .82 and .89.

Self-concept was measured using two separate indices, one consisting of positive feelings of self-esteem and the other of feelings of self-denigration. These scales were derived from a simultaneous factor analysis of six items from the Pearlin mastery scale (Pearlin & Schooler, 1978).⁴ The self-esteem index consists of the positively worded items from both scales (7 items, internal reliability = .57), and the self-denigration index consists of negatively worded items from both scales (7 items, internal reliability = .76).

Two different types of coping were considered. First, we wanted to examine concrete financial coping processes. This was done by using a five-item scale measuring borrowing and spending on credit, a six-item scale measuring the extent to which the respondent had taken steps to cut back on expenses, and a four-item scale measuring use of public assistance programs.

Second, we wanted to analyze coping of a more cognitive nature. We were compelled by Rosenbaum's (1980) concept of learned resourcefulness as a constellation of self-control skills that allow the individual to regulate emotions and cognitions that interfere with appropriate functioning. We administered eight items from Rosenbaum's Self-Control Schedule (Rosenbaum, 1980) in our survey.⁵ These were subsequently separated into two subscales based on the results of exploratory factor analyses. One of the resultant indices is a four-item measure of intrusive thoughts and lack of self-control (e.g., "I cannot avoid thinking about mistakes I have made I the past")—coded so that high scores indicate avoidance of these problems. The other is a four-item measure of active coping (e.g., "When faced with

⁴The decision to use six-item subsets of the larger Mastery and Self-Esteem scales derives from unpublished reanalysis of the data from the first wave of Pearlin's longitudinal study of the Chicago metropolitan area (Pearlin & Schooler, 1978) conducted by Ronald Kessler and some of his colleagues at the Survey Research Center of the University of Michigan. In these analyses, scores on the total scales were regressed on all possible subsets of the component items. The six items retained from each scale explained in excess of 80% of the variance in the total scale and, in neither case, did any additional individual items add significantly to the total variance explained.

⁵This set of items was selected on the basis of pilot analyses, which documented that they had the highest loadings in factor analyses of the full item battery.

a difficult problem, I try to solve it an orderly way"). The internal consistency reliabilities of these scales in our sample were .58 and .57, respectively.

Two measures of financial resources were used. One was derived from a single question asking the respondent how much income he or she received from sources other than his or her own full-time employment. The other was derived from a single question asking the respondent for an approximation of the total dollar value of his or her easily liquefiable assets (i.e., stocks and bonds) that he or she possessed.

PREVIOUS ANALYSES

A brief description of our findings to date will help frame the questions we address in this paper. Table I displays the comparison of the currently unemployed and stably employed groups in our sample—in terms of mean scores on the continuous health measures and in terms of their probabilities of experiencing extreme, perhaps clinically relevant, levels of distress. The "extreme distress" cutoff points for the three mental health indices are the mean symptom levels among psychiatric outpatients found by Derogatis (1977) in his validation studies. The cutoff point for the physical illness index was the 90th percentile of the sample distribution of scores.

As the table clearly indicates, unemployment was associated both with significantly elevated symptoms levels and with significantly elevated risk of extreme distress. In addition, analyses not reported here show that these estimates are not biased by differential selection into unemployment on

Table I. Employment Status and Distress

	Standardized means ^a		
	CU	SE	Difference
Depression	.311	-.188	.499 ^b
Anxiety	.293	-.197	.490 ^b
Somatization	.115	-.179	.294 ^b
Physical illness	.178	-.131	.309 ^b
Dichotomous measures of extreme distress			
			Relative risk
Depression	.149	.074	2.01 ^b
Anxiety	.152	.045	3.37 ^b
Somatization	.252	.130	1.94 ^b
Physical illness	.168	.066	2.55 ^b

^aCU = currently unemployed, SE = stably employed.

^bSignificant at the .05 level.

Table II. Decomposition of Standardized Effects of Current Unemployment Through Strains

	% Anxiety	% Depression	% Somatization	% Physical illness
Direct effect	48	36	-17	27
Indirect through				
Financial strain	41	51	100	65
Marital difficulty	3	6	6	1
Affiliative interaction	-3	-3	-3	-2
Financial events	9	10	13	7
General events	0	0	2	2

the basis of prior health status (see Kessler, House, & Turner, 1987). We were initially concerned that a different kind of selection was occurring, one brought on by an inverse relationship between distress and the probability of reemployment. However, later analyses using longitudinal data demonstrated that this type of selection was not occurring either (Kessler et al., 1989).

In other analyses (Kessler, Turner, & House, 1987), we attempted to uncover the features of the unemployment experience that account for its stressfulness. Using information obtained about the level of financial strain the individual was experiencing, the strains and satisfactions of his or her marriage, the amount of informal social contact typically experienced, and the occurrence of other life events over the past year, we analyzed the extent to which each of these mediated the relationship between unemployment and health. Table II presents the decomposition of the effects of unemployment on the four health outcomes (see Appendix). The results are consistent in showing that financial strain is the only important mediator, explaining 41 and 100% of the effects of current unemployment and between 30 and 64% of the effects of previous unemployment. The other indirect effects are of trivial comparative magnitude.

In addition to interpreting the health effects of unemployment, we evaluated the possibility that the stresses in question could modify these effects. If coping capacities become exhausted over the unemployment period, the individual's capacity to manage other strains would be reduced. In such a case the health effects of unemployment would be exacerbated when other types of stress are temporally proximal.

As reported by Kessler, Turner, & House (1987), the only stress of those we examined that exhibited such an effect was the occurrence of non-financial life events. These events, while uncorrelated with unemployment, increased the impact of unemployment on physical and psychological dis-

stress. This effect was not the result of an exacerbation of financial strain, but appeared to act apart from this intervening mechanism. Furthermore, net of financial strain, there was no adverse health effect of current unemployment in the absence of another stressful event.

On the basis of these analyses we concluded that, for the health indicators we considered and the population we sampled, the effects of current unemployment are due entirely to two influences. First, unemployment results in increased financial strain which, in turn, results in elevated physical and psychological distress. Second, unemployment heightens the individual's vulnerability to the health-damaging effects of other life events. There are no significant effects of unemployment net of these two influences. These findings have allowed us to be far more detailed in our analyses of adjustment to unemployment than would have been possible otherwise. It appears that coping with job loss is largely a matter of adjusting to the increased financial strain involved. This is not the entire picture, however. There seem to be three ways in which a personal or social resource could act to modify the unemployment-illness relationship. First, it could buffer the impact of unemployment on the experience of financial strain. Second, it might act to buffer the impact of increased financial strain on the health outcomes. Finally, such a resource could lessen the effects of unemployment on these health outcomes independent of financial strain—perhaps by counteracting the heightened vulnerability of unemployed people to other stressful life events.

In the new analyses presented in this paper, we examine the effects of a number of resources on the relationship between unemployment and ill health. In doing so, we are interested in the way each exerts its ameliorative effect. Presumably, different resources could be important for adjustment to different aspects of the unemployment experience. An understanding of these processes, in turn, could be important in designing interventions.

MODIFIERS OF THE HEALTH EFFECTS OF UNEMPLOYMENT

The initial task in evaluating modifier effect was to identify the resources that significantly interact with unemployment to predict each of our outcome variables. A multistep procedure was used. First, interactive regression equations were estimated for each of the modifiers and each outcome variable. These equations had the form

$$\text{Outcome} = b_0 + b_1\text{CU} + b_2\text{PU} + b_3\text{R} + b_4\text{CU} \times \text{R} + b_5\text{PU} \times \text{R} + \text{Controls} \quad (1)$$

where CU and PU are dummy variables for currently unemployed and previously unemployed respondents, R is the resource, and $CU \times R$ and $PU \times R$ are interaction terms. The coefficients b_4 and b_5 are interpreted as modifying influences—the extent to which the effects of current and previous unemployment vary as a function of the resource.

It is important to recognize that the accuracy of b_4 and b_5 as estimates of modifying effects hinges on the validity of the causal model implicit in Equation 1. In particular, the modifier coefficient will be biased if the recursivity assumption is violated and adjustment to unemployment has reciprocal effects on the modifiers. An effect of this sort could occur, for example, if the depression caused by job loss led to the subsequent erosion of social support networks. We recognize that processes of this sort are plausible, but we are unable to distinguish them from stress-buffering effects with the cross-sectional data available to us. Under most plausible forms of bias, however, the effect would be to magnify our estimates of modifying effects, which means that we are unlikely to overlook an important modifier because of this bias.

Equation 1 was estimated 76 times—for each of 19 different modifiers and each of 4 outcomes. There were 19 modifiers instead of the 14 described above (7 measures of support, 2 of self-concept, and 5 of coping) because 5 of the social support measures (all those other than marital status and marital support) were evaluated separately among married respondents and unmarried respondents. We focus on the coefficients involving current unemployment, rather than on those involving previous unemployment or the combined sample of currently/previously unemployed, because the health-damaging effects of job loss are most pronounced among the currently unemployed and the evidence suggests that these coefficients are not inflated due to selection into or out of unemployment.

It is likely that a few coefficients will be significant merely by chance in such a large series of replications. Therefore, it is important to evaluate the significance of the overall series rather than merely focus on separate coefficients. We did this by considering the significance of the b_4 coefficients across the entire set of 76 equations.⁶ Twenty-six of these coefficients were significant at the .05 level (34%), which is considerably more than we would expect by chance. Furthermore, many of the separate coefficients

⁶Although parallel analyses were carried out for b_5 coefficients, we focus on the effects of current unemployment in this paper because these were much more substantial than the effects of previous unemployment. As noted in a previous report (Kessler et al., 1989), the unemployed people in this blue-collar sample were characterized by a rapid return to health shortly after becoming reemployed. This contrasts sharply with the results of research on unemployment among white-collar workers, where residual adverse health effects are commonly observed (e.g., Fineman, 1983).

were significant even when we adjusted for multiple comparisons. Specifically, we found the following overall patterns: (a) 6 of the 20 b_4 coefficients involving the effects of support among unmarried people were significant at the .0025 (.05/20) level; (b) 4 of the 8 b_4 coefficients involving the effects on self-concept were significant at the .0062 (.05/8) level; and (c) 2 of the 20 b_4 coefficients involving the effects of coping were significant at the .0025 (.05/20) level. None of these three patterns can be attributed to chance. The only insignificant set of results involved the social support measures among married people. None of the b_4 coefficients involving these effects was significant in tests that adjusted for multiple comparison, although being married itself buffered the impact of unemployment on anxiety and depression in the total sample.

The next step was to combine all of the significant predictors into summary equations. This was done by estimating an equation for each of the four outcomes that included the marginal effects for all resources as well as all significant modifier effects from the 76 earlier equations. Some of the resources were highly intercorrelated (especially the different social support scales) and this summary analysis helped take this into consideration.

The third step was to trim these combined models to include only modifier effects that remained significant after controlling for the other modifiers. Summary results of these trimmed models showed that financial factors are of very little consequence (Kessler, Turner, & House, 1988). Neither liquid assets nor income from other sources act to buffer the effects of unemployment. The same is true for the use of financial coping strategies. Public assistance buffers the impact of unemployment on symptoms of physical illness (an important finding from a policy perspective) but shows no such effects for the other three outcomes.

The story is far different for the personality and social support indicators. High self-esteem reduces the impact of current unemployment on all four of the health outcomes. Avoiding self-denigration reduces the impact of unemployment on anxiety and depression and avoiding intrusive thought softens the impact of unemployment on anxiety. The active coping measure fails to exhibit any modifying effect.

Among the indicators of social support, two exhibit relatively consistent and substantial buffer effects. Controlling for the attenuating effects of the other resources, marriage no longer significantly modifies the effects of unemployment on any of the four outcomes. However, among the unmarried, both having a confidant and being integrated into informal social networks are important buffers. Social integration reduces the effects of current unemployment on all four outcomes, while having a confidant lessens the impact of unemployment on physical illness and somatization.

MODIFYING AND MEDIATING INFLUENCES: A SYNTHESIS

From the foregoing analyses, it is clear that social support, self-concept, and coping all help reduce the effects of unemployment. Our earlier work on mediating effects provides an indirect glimpse into the ways in which these modifying effects occur. It is likely that support, self-concept, and coping influence adjustment either by reducing the level of financial strain, by reducing the impact of financial strain, or by reducing vulnerability to other stressful events.

In order to trace out these pathways, we carried out a decomposition similar to the one described in Table II. This new decomposition was somewhat more complex than the first one, however, in that we decomposed the modifying effects of support, self-concept, and coping through financial strain. The effects of each modifier on each outcome are divided into three components. Figure 1 illustrates the way each component exerts its effect. The first component occurs when there is a significant interaction between unemployment and a modifier in predicting financial strain. This component, which we call a *protective effect*, can be interpreted as the modifier reducing the impact of unemployment on financial strain. The second com-

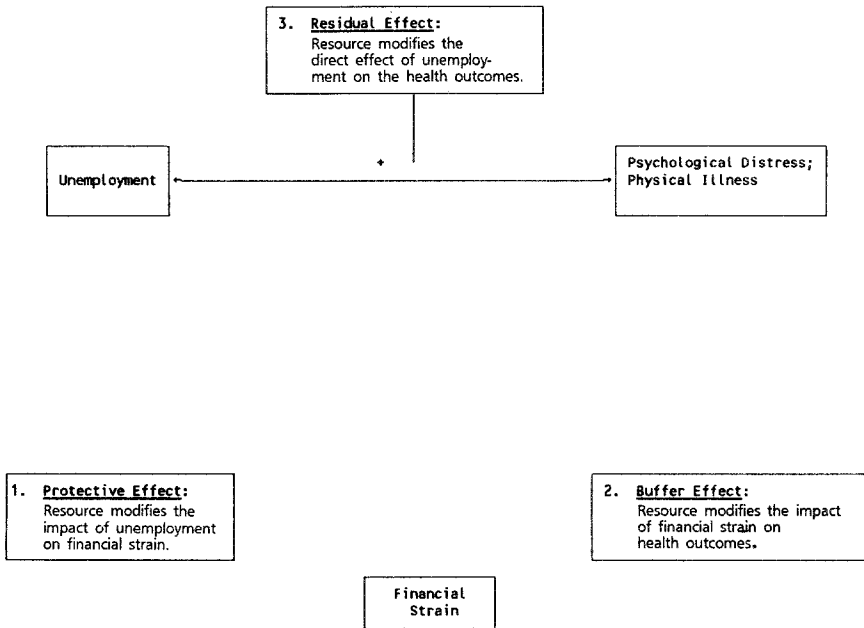


Fig. 1. Components of the modifying effects of personal and social resources.

ponent, the *buffer effect*, occurs when there is a significant interaction between the modifier and financial strain in predicting the outcome. This can be interpreted as the modifier reducing the impact of financial strain on distress. The third component, the *residual effect*, cannot be attributed to either the protective or buffer effects of the modifier.⁷ (See Table III.)

Three of the modifiers have protective effects, where the resource interacts with current unemployment to predict financial strain. These are integration into affiliative networks, access to an intimate, confiding relationship, and positive self-concept. The two social support modifiers are genuinely protective, in that the impact of the unemployment on financial strain is weakest among people who have these resources. Positive self-concept, in contrast, exacerbates the impact of unemployment on financial strain.

More detailed analyses found that these protective effects do not involve genuine variation in financial resources. This was documented in statistical analyses showing that objective financial resources (income from other sources than the lost job, liquid assets including cash, stocks, bonds, and possessions that could be converted easily into cash) do not explain the protective effects of social support nor the exacerbating effects of self-concept. Although we have no way of determining the processes involved with the data available to us, it is worth noting that objective resources of another sort could be involved in the social support effects if people who have support have comparatively high access to in-kind exchanges and receipt of goods and services that do not require money payment.

Another possibility is that support is associated with the perception that assistance is available and that this perception reduces feelings of financial strain. There is evidence that support can operate in this general way by bolstering perceptions of access to important resources (Wethington & Kessler, 1986). A parallel interpretation can be made for the exacerbating effects of positive self-concept, if we assume that it is associated with unwillingness to ask for assistance from friends or relatives. If this is so, then positive self-concept would be related to a low perception of access to financial resources. Another possibility is that people with a positive self-concept have a particularly difficult time accepting financial constraints.

⁷As in the decomposition of mean differences, the decomposition presented here can be broken down into either three or four components. The four-component specification includes an overlap component that cannot be attributed uniquely either to the protective or buffer effects of the resource. The three-component specification assigns this fourth part of the decomposition equally to the protective and buffer components (see Jams & Thornton, 1975, for a discussion of these two different approaches and their interpretations). For our purposes here, where we focus on the relative magnitudes of the protective and buffer components and on the absolute value of the residual components, the distinction between the two methods is not of great importance.

Table III. Decomposition of Modifier Effects Among the Currently Unemployed

	Social support (%)		Self-concept (%)		Coping (%)	
	Confidant	Social integration	Positive self-esteem	Low self-denigration	Low intrusive thoughts	Public assistance
Anxiety						
Protective	—	10	-30	8	9	—
Buffer	—	31	-12	47	50	—
Residual	—	59	143	46	41	—
Depression						
Protective	—	15	-29	14	—	—
Buffer	—	41	-3	51	—	—
Residual	—	44	132	35	—	—
Somatization						
Protective	40	14	-20	—	—	—
Buffer	137	51	-5	—	—	—
Residual	-77	34	125	—	—	—
Physical illness						
Protective	16	11	-19	—	—	14
Buffer	7	45	-28	—	—	14
Residual	77	44	147	—	—	73

We turn to buffer effects next, where the resource interacts with financial strain to predict the illness outcomes. All of the resources have effects of this sort. Access to a confidant interacts significantly with financial strain to predict somatization. Integration has similar effects on somatization and self-reported physical illness. Low self-denigration buffers the impact of financial strain on depression. Cognitive coping has a similar effect on anxiety. In all of these cases, the health-damaging effects of financial strain are lowest among people with high values of the resources.

Table III shows that these buffer effects are generally more powerful than the protective effects. With the exception of positive self-concept—where both kinds of effects work in the opposite direction from the other resources—the magnitude of the buffer effect exceeds the magnitude of the protective effect in 8 of 10 comparisons. Buffer effects in these 10 comparisons average over three times larger than protective effects. This suggests that the resources considered here are much more important in reducing the emotional impact of financial strain than in preventing this strain from occurring.

It is important to note that we cannot totally explain the modifying effects of support, self-concept, and coping by tracing out their abilities to

protect against and buffer the effects of financial strain. Substantial residuals exist in most of the decompositions in Table III. Unfortunately, we cannot explore the reasons for these residual effects in most cases, because they are insignificant statistically. There is one major exception to this general statement, however, involving positive self-concept. The residual modifying effects of this resource are significant in all four equations in Table III. Indeed, the residuals are actually larger than the total effects, due to the fact that positive self-concept exacerbates the impact of unemployment on financial strain.

The task remains to explain these effects. The results in Table III would lead us to believe that they involve vulnerability to other life events. As noted in the discussion of that earlier analysis, the health-damaging effects of unemployment in this sample, net of financial strain, can be found only among people who experience another stressful event in addition to job loss. If the interpretation of the residual modifying effect of positive self-concept is to be consistent with this finding, it should have something to do with the interaction between unemployment and other life events. Specifically, positive self-concept should buffer the health-damaging effects of unemployment more strongly among people who experienced another stressful event than among those who did not.

Table IV contains the results of analyses aimed at testing this hypothesis. The results presented in this table break down the residual modifying effects of positive self-concept into two parts; the residual among respondents who experienced a stressful event other than job loss, and the residual among respondents who did not experience any other stressful event. These coefficients come from a model of the form

$$\text{Outcome} = b_0 + b_1\text{CU} + b_2\text{PU} + b_3\text{FS} + b_4\text{LE} + b_5\text{PSC} + b_6\text{CU} \times \text{LE} + b_7\text{PU} \times \text{LE} + b_8\text{LE} \times \text{PSC} + b_9\text{CU} \times \text{PSC}(\text{LE} = 1) + b_{10}\text{CU} \times \text{PSC}(\text{LE} = 0) + \text{Controls} \quad (2)$$

where CU, PU, and the interaction terms are defined as Equation 1, FS is the financial strain scale, LE is a dummy variable coded one for people who experienced a stressful event in addition to unemployment and zero otherwise, and PSC is the positive self-concept scale.

The two parameters of interest are b_9 and b_{10} , which are coded as subgroup coefficients rather than in the more conventional contrast coding approach.⁸ These two coefficients define the modifying effects of positive

⁸To do this, we created two separate CU \times PSC terms. One was assigned a value of zero for people who had not experienced an event, the other was assigned a score of zero for people who had. This approach yielded direct estimates of the CU \times PSC interactions within the LE=0 and LE=1 subsamples.

Table IV. Modifying Effects of Self-Esteem in the Presence and Absence of a Life Event

	Anxiety		Depression		Somatization		Physical illness	
	b	SE	b	SE	b	SE	b	SE
CU × SE (LE = 0)	-.118	.124	-.194	.119	.018	.126	-.035	.140
CU × SE (LE = 1)	-.394 ^a	.115	-.403 ^a	.108	-.439 ^a	.107	-.347 ^a	.122

^a $p \leq .05$.

self-concept on the relationship between current unemployment and the outcome. The first, b_9 , defines the modifying effects among respondents who also experienced some other stressful event, while b_{10} defines the modifying effects among respondents who did not experience another event. The results reported in Table IV are the b_9 and b_{10} coefficients for equations predicting each of the four outcomes.

These results show that the modifying effects of positive self-concept are substantially greater among respondents who experienced some other stressful event in addition to job loss. This coefficient is statistically significant in all four equations while the modifying effect among people who did not experience another event is not significant in any of the four. These results support the conclusion that positive self-concept facilitates adjustment to the stress overload created by the cooccurrence of unemployment and another stressful event.

DISCUSSION AND IMPLICATIONS FOR INTERVENTION

Our purpose in this paper has been to identify the kind of personal and social resources that assist people in coping with involuntary unemployment. In addition, we wanted to identify the point in the stress process at which each of these resources exerted its effect. We knew from previous analyses that the negative health consequences of unemployment in this population can be entirely explained by increases in subjective financial strain and heightened vulnerability to the occurrence of unrelated life events. The analyses presented here allowed us to evaluate the effects of several theoretically plausible modifier variables. In an effort to interpret the effects of the significant modifiers, we divided their effects on the unemployment-illness relationship into three components: protection against the experience of financial strain; buffering of the impact of financial strain on physical and mental health problems; and attenuation of the heightened vulnerability to other life events that unemployed people suffer.

Of the resources we studied, none exhibited an important “protective” effect against the financial strain that results from unemployment. The few effects that were found were very small relative to the “buffer” and “residual” effects. This leads us to believe that perceived financial strain is largely an inevitable consequence of unemployment. Regardless of available resources, reduction in income results in financial deprivation, at least relative to the financial situation that existed prior to job loss. Fortunately, it does appear that social support, in the form both of integration into affiliative networks and the possession of a confidant, buffers the impact of financial strain on health and emotional well-being. For anxiety and depression, the ability to avoid intrusive thoughts and feelings of self-denigration have similar effects.

The social support component of the MPIRC intervention was intended primarily to maintain job-seeking motivation. The intervention team was also aware, however, of the palliative effects of support in affecting mental health. Indeed, much of the design of the intervention was directed at establishing trust in the trainer among the participants (Caplan et al., 1989). Participants also were surrounded by people who were experiencing similar financial burdens. The results we have presented suggest that the affiliative interaction available in this type of setting can assist the unemployed individual in coping with financial strain.

Our results also suggest that self-esteem is an important resource for adjusting to unemployment in that it increases resistance to other stressors that may occur at the same time. It is interesting that the ameliorative effect of self-esteem is entirely independent of financial strain. Findings from other studies suggest that damage to the self-concept is often most evident in situations characterized by low potential for financial burden, such as among well-educated, highly skilled workers (Turner, 1989). It is possible that the direct effect of unemployment on health and the indirect effect through financial strain represent effects among different groups of people rather than components of the effect of unemployment within individuals. If this were the case, then attempts to change perceptions of self-worth may not be advisable for an intervention aimed at individuals in difficult financial circumstances.⁹

This is only true, however, if the only concern of an intervention is the individual's health while unemployed. The fact that the most noxious

⁹The fact that positive self-concept seems to exacerbate the impact of unemployment on financial strain means that an intervention aimed at enhancing self-concept would lead to heightened feelings of financial strain. It is important to note, however, that the effect of positive self-concept on financial strain among the currently unemployed is modest. The substantial positive interaction occurs because positive self-concept also has a small negative effect on financial strain among the stably employed.

consequence of unemployment is the financial burden it causes suggests that a primary intervention goal should be the relatively rapid reemployment of the participants. Indeed, in our analyses of data from a follow-up interview conducted 1 year after the original survey, we found that recently reemployed individuals had recovered levels of mental health comparable to people who had never lost a job (Kessler et al., 1989). This means that attempts to bolster self-esteem should be included in intervention efforts because low levels of self-esteem are known to inhibit job search activity (Feather & O'Brien, 1986).

The MPIRC intervention team was particularly concerned about the effects of successive failures to find a job among participants with low self-esteem. Aware that such failures can create feelings of helplessness (Wortman & Brehm, 1975), they hoped that a bolstered sense of self-worth would act as an inoculation against setbacks in the job search process. It was thought that job-seeking motivation could be maintained if interim failures were not attributed by the participant to personal inadequacies. Indeed, job-seeking motivation among the unemployed people who received the intervention was maintained through the course of the project, while motivation among unemployed people in a control group declined significantly (Vinokur et al., 1991).

The importance of self-esteem promotion in individual-level interventions among the unemployed is further underscored by other findings from our panel data showing that the people most distressed by job loss at Time 1 were the ones most likely to become reemployed by the time of the follow-up interview (Kessler et al., 1989). These findings suggest that emotionally distraught individuals may be too willing to take the first job that comes along. Although this may initially reduce their distress, low pay and poor work conditions eventually detract from well-being. Buttressing the self-esteem of unemployed individuals makes them more likely to hold out for better employment when it is appropriate to do so.

Of course, it is not always appropriate to hold out. High unemployment during recent recessions is at least partly attributable to significant historical changes occurring in the labor market. Manufacturing jobs are declining in number and reemployment has largely been due to rapid expansion of the service sector of the economy. Jobs in manufacturing now account for less than a fifth of nonagricultural employment in the United States. Between 1950 and 1986 the proportion of nonagricultural jobs accounted for by the service sector has risen from 59.1 to 75.2% (U.S. Department of Labor, 1986). Service sector jobs are, almost uniformly, lower paying than manufacturing jobs. In 1984, then, unemployed auto workers in the Detroit area were faced with the fact that the only jobs available to them involved taking a substantial cut in pay relative to their previous work.

Many were unwilling to accept these jobs and held out for their former wage. The majority of these people eventually accepted a pay cut after a prolonged period of unemployment.

This places the intervention team in the somewhat uncomfortable position of having to lower the expectations of unemployed workers, a task potentially at odds with attempts to make them feel supported and bolster their self-esteem. Nonetheless, when long-term contractions occur in particular sectors of the economy, interventions that merely enhance the participants' job search skills ultimately do nothing to solve the problem. Such interventions, if successful, only improve the reemployment chances of the participants at the expense of an equal number of nonparticipants. If downskilling continues to be a pervasive feature of this country's economy, as some have suggested (e.g., Braverman, 1974), then it is important for individual-level interventions to emphasize the need for flexibility in choosing new jobs.

APPENDIX

This type of decomposition involves estimating a series of regression equations in which the possible intervening factors are the dependent variables and the employment status dummy variables and the sociodemographic control variables are the predictors. In addition, the models for estimating the gross effects of unemployment are reestimated, this time including the component strains in the model.

$$\begin{aligned} \text{Strain} &= a + b(\text{UNEMP}) + \text{Controls} \\ \text{Outcome} &= a + d(\text{UNEMP}) + c_1 \rightarrow c_5 (\text{STRAINS}) + \text{Controls} \end{aligned}$$

Then the total effect of unemployment on a particular health outcome can be defined as

$$\text{Total effect} = d + b_1c_1 + b_2c_2 + b_3c_3 + b_4c_4 + b_5c_5$$

where d is referred to as the *direct effect* of unemployment and the $b_n c_n$ components are referred to as the *indirect effects* through each of the intervening strains. This analysis is described in more detail in Kessler, Turner, and House (1987), and a methodological exposition can be found in Alwin and Hauser (1975).

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