

# Effects of Unemployment on Mental and Physical Health

MARGARET W. LINN, PhD, RICHARD SANDIFER, BS, and SHAYNA STEIN, PhD

**Abstract:** From a prospective study of the impact of stress on health in 300 men assessed every six months, men who became unemployed after entering the study were compared with an equal number, matched for age and race, who continued to work. Psychological and health data after unemployment were compared between the two groups by multivariate analysis of variance and covariance. After unemployment, symptoms of somatization, depression, and anxiety were significantly greater in the unemployed than employed. Large standard deviations on self-esteem scores in the unemployed

group suggested that some men coped better than others with job-loss stress. Further analysis showed those with higher esteem had more support from family and friends than did those with low self-esteem. Furthermore, unemployed men made significantly more visits to their physicians, took more medications, and spent more days in bed sick than did employed individuals even though the number of diagnoses in the two groups were similar. (*Am J Public Health* 1985; 75:502-506.)

## Introduction

For most individuals, basic life requirements are met through employment. However, work does much more than supply the means for meeting physical needs; it also can satisfy creative urges, promote self-esteem, and provide an avenue for achievement and self-realization. Conversely, unemployment might be expected to increase anxiety and depression, lead to lower self-esteem, and produce adverse physical health consequences, particularly when efforts to locate work are met with failure over a long period of time.

Unemployment has occurred in the lives of many people in this country during the past decade. Despite some recent decreases in the numbers of persons unemployed, it has been estimated that more than 9 per cent of the work force will be out of work in 1984.<sup>1</sup> Individual accounts<sup>2</sup> of the devastating impact this can have on day-to-day living cannot be ignored.

In terms of research regarding the effects of unemployment, both macro<sup>3-5</sup> and micro<sup>6-11</sup> studies have contributed to increased understanding over the last two decades. However, research results sometimes have been conflicting and ambiguous partly due to differing research methods, different populations under study, and different interpretations of the data. The strengths and weaknesses of previous research have been done rather extensively by others.<sup>11-15</sup> As Kasl<sup>11</sup> pointed out, “. . . only a painfully prolonged accumulation of diverse evidence holds the best promise of yielding a reasonably clear picture.”

One underlying theme which helps to provide some organizational perspective in reviewing previous findings regarding unemployment is that unemployment is considered a stressful event which has the potential for affecting mortality and/or morbidity whether one is examining national trends in health and death rates (macro) or specific changes in selected individuals over time (micro). The extent to which life and physical and psychological health are affected is the subject of study. Catalano and Dooley empha-

sized the need to broaden the concept of unemployment stress to the stress of economic change. Their study of the Kansas City economy showed that residents reported more stressful events and affirmed more depressive items following economic fluctuations.<sup>16</sup>

In a detailed prospective study which focused directly on the worker facing unemployment, Kasl examined a variety of indicators of health and economic strain over a two-year period.<sup>17</sup> He found elevated depression, anxiety, and somaticism occurring only as brief initial responses for some workers; for others the emotional strain did not abate even when unemployment ended.<sup>18</sup> It is possible, then, that for some of the unemployed, psychiatric symptoms were chronic. The Work and Unemployment Project,<sup>19</sup> a panel study looking at the effects of involuntary loss of jobs by husbands, showed that being without work was strongly associated with higher levels of psychiatric symptoms. Once reemployed, the strain observed during the unemployment period diminished to levels below those of the control group (those persons not experiencing unemployment during the study period). Other investigations dealing with psychological consequences of unemployment have shown that inpatient first admissions to hospitals in a state system are significantly related to economic downturn for low status occupational groups<sup>20</sup> and that there are significant relationships between hospital readmission rates for psychiatric reasons and unemployment.<sup>21</sup>

In an important work by Kasl and Cobb in which cardiovascular functioning was examined in relation to job loss,<sup>8</sup> the authors broadly concluded that their results failed to provide reasonable support for the hypothesis that the job-loss unemployment experience increased the risk of heart disease. This conclusion disagrees with the inferences drawn from earlier macro studies by Brenner.<sup>3,4</sup> However, Kasl and Cobb went on to indicate why they believed the hypothesis is a tenable one even though their data did not support it. Their discussion, which in a subsequent paper by Kasl<sup>11</sup> was even further enhanced, highlights the importance of interpretation of data and limits of research design.

Social support, as a potential mediator of stress, has been examined for its impact on moderating the consequences of unemployment.<sup>22-28</sup> In general, results have shown that unemployment stress is exacerbated by a low sense of social support. Gore found that the rural unemployed evidenced a significantly higher level of social support than did the urban unemployed.<sup>22</sup> Also, she discovered that while unemployed the unsupported showed significantly higher elevations and more changes in cholesterol measures,

Address reprint requests to Margaret W. Linn, PhD, Director, Social Science Research, VA Medical Center, 1201 NW 16th Street, Miami, FL 33125. Dr. Linn is also Professor of Psychiatry, University of Miami School of Medicine. Mr. Sandifer is a Research Associate, Department of Psychiatry, U-Miami School of Medicine; Dr. Stein is Social Science Researcher, VA Medical Center, and Adjunct Instructor, Department of Psychiatry, U-Miami School of Medicine. This paper, submitted to the *Journal* May 24, 1984, was revised and accepted for publication November 28, 1984.

illness symptoms, and affective responses than did the supported unemployed. Kasl<sup>11</sup> pointed out that the role of social support depends on the person's stage of adaptation to the unemployment experience. For persons whose unemployment status remained uncertain over more prolonged time periods, high levels of social support did have a buffering influence.

The purpose of this paper is to describe the effects of job loss on psychological and physical function and to determine whether the degree of stress perceived as a result of job loss and the level of social support during unemployment are related to psychological and physical function.

### Method

Men included in this study are among the participants in a Veterans Administration study of the effect of environmental stress on immune function and the development of disease. The study was initiated in Miami, Florida, at the Veterans Administration Medical Center in 1979 as a prospective and ongoing study of 300 men entered into the project over a three-year period of time. Veterans between the ages of 35 and 60 were screened from outpatient ambulatory clinics and veterans organizations by a project nurse and included in the study if they were free from major illnesses and were willing to sign informed consent. Only 8 per cent of the eligible men declined to participate in the study. The men in the study are followed every six months for five years in regard to stress and psychological, immunological, and physiological status. At the time of entry, demographic information was obtained, and a structured interview was used to obtain the social, marital, work, and health history; these data have been updated every six months. Physical examinations and routine laboratory tests have also been done every six months.

As a part of the assessment of stress, the men complete a modified version of the Holmes and Rahe<sup>29</sup> Social Readjustment Rating Scale which identifies occurrence of any of 41 stressful events over the past six months. Number of months since the event occurred is recorded. For each event endorsed, a 0-9 rating is obtained to indicate the amount of perceived stress associated with the event, the degree to which the event was anticipated, the amount of responsibility the individual felt in bringing the event about, and the degree of support he received from family and friends in coping with the event. Several of the events deal with employment stresses. For the purpose of this study, only the stress of unemployment was considered. Those men who lost their jobs as a result of being fired, laid off, or "dismissed" (let go because of inadequate performance but without the stigma of actually being fired) from work between one of the six-month follow-ups were identified. Thirty men (10 per cent) qualified for inclusion by virtue of having become unemployed. An equal number of men were matched for age and race with the unemployed men. All of the matched comparison group continued to work during the time of the study. Data describing psychological and physical health status were selected from the rating time preceding job loss to serve as the baseline measurement of functional status. The rating time following job loss was used as the outcome measurement. The paired control was selected from this same time period.

Data describing psychological function and physical function were selected for comparison between the groups before and after job loss. The psychological variables came

from reliable and valid scales which measured symptoms<sup>30</sup> such as somatization, obsessive-compulsiveness, depression, interpersonal sensitivity, and anxiety; locus of control;<sup>31</sup> alienation;<sup>32</sup> life satisfaction;<sup>33</sup> and self-esteem.<sup>34</sup> Physical function was described by number of visits to a physician during the prior six months, days in bed sick during the previous six months, self-assessed health (on a 1-5 scale), current number of medications, and current number of diagnoses.

The questions for analyses were whether job loss had an adverse affect on psychological and physical functioning and whether perceived stress and social support were related to functional status. Data were analyzed by comparing psychological and physical function between the two groups of men after job loss by multivariate analysis of variance with and without the baseline measurements covaried.

### Results

The 30 men who became unemployed did not differ significantly from the 30 who continued to work in regard to background characteristics. They averaged 49 years of age (S.D. 10 years). Six men in each group (20 per cent) were Black; about three-fourths were married and living with their wives. The average years of education was 12. They averaged 3.8 on Hollingshead's two-factor index,<sup>35</sup> which indicated lower middle class. Most of the unemployed were blue collar workers.

Table 1 shows the reasons for loss of employment and the rating provided by the men regarding this stressful event. Amount of stress associated with loss of work was over 6 on the 0-9 scale. Most of the men had anticipated the event happening to a moderate degree. Very little responsibility was acknowledged for bringing the event about. The degree of social support differed by reason for loss of employment, with those who were fired feeling less support than the other groups.

Although the matched groups were similar in regard to psychological and physical function initially, any minor variations in baseline ratings were removed by holding the prescores constant in analyses as recommended by Bancroft.<sup>36</sup> None of the men who lost their jobs were reemployed at the time of the follow-up rating.

Table 2 shows the adjusted means for the psychological variables at the six-month rating following job loss for those who were unemployed and for their matched controls. Those who lost their jobs had more symptoms of somatization, depression, and anxiety after the experience than those who continued to work. Other psychological scores were also in the expected direction of being less favorable for the unem-

TABLE 1—Ratings of Stress Related to Reasons for Loss of Work

Stress Variables	Reason for Loss of Job			t-Test
	Fired (N = 7)	Dismissed (N = 9)	Layed Off (N = 14)	
Time since occurrence (months)	3.4	3.1	4.0	.58
Degree of stress†	7.1	6.8	6.1	.26
Degree event was anticipated†	4.2	5.0	5.8	1.68
Degree of responsibility for event†	2.0	1.3	1.1	1.04
Degree of support received†	2.3	4.0	4.7	2.05*

\*p < .05 by Students t-Test.

†Indicates the event was rated 0-9 in regard to degree, with 0 = none to 9 = extreme.

**TABLE 2—Adjusted Means for Employed and Unemployed Men on Psychological Function by Multivariate Analysis of Covariance**

Variables	Employed		Unemployed		F-Ratios
	Mean	SD	Mean	SD	
Symptoms					
Somatization	18.0	6.6	22.5	7.9	3.65*
Obsessive-Compulsiveness	12.2	4.7	14.9	5.8	3.44
Depression	16.1	5.7	20.5	7.8	3.78*
Interpersonal Sensitivity	10.8	3.8	12.5	4.8	1.89
Anxiety	9.8	3.0	11.9	4.2	4.92*
Locus of Control	7.9	3.3	8.5	2.9	.46
Alienation	3.5	2.9	4.1	3.0	.58
Life Satisfaction	35.5	6.7	37.1	7.2	1.20
Self-Esteem	40.0	8.1	42.6	13.2	1.98

\* $p < .05$ , Multivariate  $F = 2.87, p < .02$ .  
NOTE: Higher scores indicate less favorable responses.

ployed than employed. Differences were of the same magnitude with and without prescores held constant for the groups.

The standard deviation for the self-esteem ratings was large in the unemployed group. Since this indicated that there was considerable variance in self-esteem ratings, the unemployed group was further divided by median scores on self-esteem into those with high and low esteem. The high and low esteem groups were then compared on perceived stress and family support in dealing with the stress of unemployment. Those with high esteem perceived less stress from job loss than those with low esteem; in addition, those who had high self-esteem receiving more support from family and friends than those with low self-esteem.\*

Table 3 shows how physical function of the employed and unemployed men differed after job loss. Days in bed during the six months averaged five for the unemployed and .9 for the employed. Visits to the physician were five times more in the unemployed than employed men; the unemployed men averaged taking twice as many medications as the employed men; self-rated health was less favorable in those who lost their jobs. Although number of diagnosed illnesses did not differ between the groups, the presenting complaints for the increased number of physician visits were most often related to gastrointestinal, respiratory, and skin disorders.

To better understand the relationships between psychological and physical health variables after unemployment, these variables were intercorrelated for the unemployed group. In addition, the outcome variables were also correlated with the degree of stress associated with loss of work and the amount of social support received from family and friends in coping with the stress of unemployment.

Table 4 shows the correlations between psychological and physical health variables after loss of work. Those who made more visits to their physicians had more symptoms of somatization, depression, and anxiety. More time spent in bed was associated with increased somatization and depression. Those who took more medications had more somatization and were less internal in their locus of control. Poorer self-assessed health correlated with several of the psychological states, such as more somatization, obsessive-compulsiveness, depression, and anxiety and less life satisfaction. A

\*Data available on request to authors.

**TABLE 3—Adjusted Means for Employed and Unemployed Men on Physical Function by Multivariate Analysis of Covariance**

Variables	Employed		Unemployed		F-Ratios
	Mean	SD	Mean	SD	
Physician Visits	1.2	2.6	5.9	4.0	9.23**
Days in Bed	.9	2.2	5.0	6.9	10.67**
Number of Medications	1.9	1.7	3.6	2.0	3.99*
Self-Assessed Health	2.0	.8	2.9	.7	4.36*
Number of Diagnoses	1.8	1.3	1.9	2.0	.92

\* $p < .05$ ; \*\* $p < .01$ , Multivariate  $F = 3.70, p < .001$ .  
NOTE: Self-assessed health rated 1-5, with higher being less favorable ratings.

higher number of diagnoses was associated with more somatization and less life satisfaction. Higher ratings of somatization or an increase in bodily symptoms was associated significantly with all of the physical health indicators. More adverse psychological states were more often significantly related to poorer self-assessed health.

Table 5 shows how psychological and health status after loss of work correlated with degree of perceived stress from loss of employment and amount of social support from family and friends in coping with the stress of losing a job. Those who perceived more stress from unemployment had increased symptoms of somatization, depression, and anxiety. The higher the perception of the stress, the more visits were made to the physician and the less favorable health was assessed. All of the correlations with social support were in the direction of more support going with more favorable psychological and physical health ratings, but only two of the correlations were significant statistically. Less social support related significantly to poorer self-esteem and more visits to the physician.

*Discussion*

Results from this study strongly suggest that unemployment had an adverse impact on psychological function, with the unemployed becoming more anxious, depressed, and concerned with bodily symptoms than those who continued to work. Since groups did not differ initially regarding these psychological states, it seems likely that these symptoms were associated with job loss rather than preexisting psychological symptoms. Being unemployed without a primary source of income would be expected to produce anxiety and depression. Further, the increased depression, often manifested by physical symptoms of loss of appetite, sleep, and sexual interests, could account for more worry over physical symptoms as expressed by increased somatization and unfavorable self-health assessments that were observed in the unemployed.

Loss of work would be expected to affect self-esteem. Not having work could limit the person's chances for feelings of achievement, accomplishment, and satisfaction and could increase guilt about failure to provide for one's family. Nevertheless, in this study unemployed men did not differ from employed men in their self-esteem ratings at the six-month rating period. It is interesting to note that the ratings of self-esteem among the unemployed were bimodal. This suggests that some unemployed men may have been able to cope better than others. Further examination of the data showed that perceived amounts of stress from job loss differentiated significantly between those with high and low self-esteem. Also, greater support from family and friends in

**TABLE 4—Correlations of Psychological Variables with Physical Health Indicators for the Unemployed**

Psychological	Physical Health				
	MD Visits	Days in Bed	Number of Medications	Self-Rated Health	Number of Diagnoses
Symptoms					
Somatization	.50**	.41*	.38*	.66**	.36*
Obsessive-compulsiveness	.24	.01	.14	.35*	.06
Depression	.42*	.38*	.13	.37**	.15
Interpersonal sensitivity	.23	.06	.20	.31	.19
Anxiety	.36*	.07	.16	.42*	.25
Locus of Control	.13	.17	.42*	.19	.29
Alienation	.05	.11	.04	.29	.14
Life Satisfaction	.20	.06	.14	.47**	.35*
Self-Esteem	.04	.17	.23	.16	.08

\*p < .05; \*\*p < .01 Pearson Correlations.

NOTE: Higher scores on psychological variables are less favorable responses. Self-assessed health is rated 1–5 (higher worse).

dealing with unemployment related significantly to better self-esteem. These results lend support to observations by others<sup>7,22</sup> in which the effects of unemployment to some extent are dependent on the strengths within the individuals and the support provided to them by significant persons in their lives.

Examination of correlations between psychological and physical function showed these two areas to be highly correlated. Furthermore, self-assessed health was highly correlated with both psychological and physical functioning, indicating the person's perception of health was related to functional status in general. Tessler, *et al.*,<sup>37</sup> found a relationship between psychological distress and use of primary care health services. Persons who were distressed emotionally by being depressed and anxious and who saw their health as poor dealt with these feelings in part by seeking medical advice. In this respect, medical practitioners and institutions often fulfill social and emotional needs of the patients. This is somewhat confirmed in this study in that the number of diagnoses did not differ between the employed and unemployed groups, even though medications, physician visits,

and days in bed were significantly greater for the unemployed than employed. These results lend support to those of Kasl and Cobb who found that job loss increased the use of medical care.<sup>8</sup> The types of diagnostic problems identified among those who lost their jobs suggests that illnesses may have been episodic and possibly emotionally derived (skin rashes, colds, respiratory problems, and gastrointestinal complaints). In a study by Fagin, general practitioners were found usually to be unaware of the breadwinner's unemployment.<sup>38</sup> Therefore, it would seem important that physicians assess occurrence of recent major stresses as one factor that may precipitate repeated visits for illnesses over a short span of time.

The increase in utilization of health services in this study may be a result of the men being veterans and able to seek care through the Veterans Administration outpatient clinics. In this sense, the study may indicate what would happen if health services were available generally for the unemployed. There was a 40 per cent increase in patient volume and 60 per cent decrease in personal incomes of Michigan physicians engaged in primary care in areas most affected by unemployment.<sup>39</sup> The long-term effects of forcing people to put off or avoid visits to primary care physicians in order to pay mortgage, utility, and food bills has not been studied. Frey<sup>40</sup> has pointed out that the forces of employment and poverty directly affect the functioning of the patient and the physician in the medical marketplace of private practice. He suggests that unemployment breeds a sort of economic "inverse care law" with the accessibility, quality, and available funds to purchase care being inversely proportional to the needs of the populations. He concluded that, in Britain, hard times produced additional work for physicians caring for patients suffering from physical and emotional consequences of poverty, but in the US, hard times produce doctors with nearly empty waiting rooms.

This study is limited by several factors: first, because of the small sample size, it was not possible to appropriately divide the unemployed group by reasons for unemployment to determine the effects of physical and psychological functioning. Liem and Rayman<sup>41</sup> pointed out the importance of determining the economic and social contexts of job loss in micro-level research; second, some of the men may have had jobs that were very stressful.<sup>42</sup> For them, unemployment could have brought some relief. However, both the preceding limitations are partially mitigated by the fact that the men were asked to rate the degree of perceived stress associated

**TABLE 5—Correlations of Psychological and Physical Health Variables with Perceived Stress and Social Support Related to Loss of Work**

	Perceived Stress	Social Support
<i>Psychological Function</i>		
Symptoms		
Somatization	.47**	-.08
Obsessive-compulsiveness	.31	-.05
Depression	.51**	-.10
Interpersonal sensitivity	.11	-.06
Anxiety	.49**	-.29
Locus of Control	.34	-.33
Alienation	.33	-.14
Life Satisfaction	.31	-.21
Self-Esteem	.42*	-.49**
<i>Physical Function</i>		
MD Visits	.49**	-.38*
Days in Bed	.30	-.16
Number of Medications	.06	-.05
Self-Rated Health	.55**	-.33
Number of Diagnoses	.28	-.12

\*p < .05; \*\*p < .01.

NOTE: Perceived stress is rated 0–9 (higher more), and social support is rated 0–9 (higher more). Higher scores on psychological variables are less favorable responses. Self-assessed health is rated 1–5 (higher worse).

with their unemployment status. A third limitation is that we do not know whether the psychological and physical declines observed in the unemployed group at the six-month rating period began to occur prior to their unemployment (perhaps in anticipation), immediately after losing work, or over a longer time interval, or whether the observed adverse reactions would be subject to adaptation even if unemployment continued beyond six months.

In summary, results suggest that unemployment produces adverse psychological symptoms and that utilization of health services, when they are available, are increased substantially. Some individuals may be able to cope better with the stress of unemployment than others. People with strong support systems and greater self-esteem seemed to experience less unemployment stress. Identifying those who are at high risk for psychological and physical problems and finding ways of preventing them from suffering the adverse effect of unemployment are important areas for further study.

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