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ABSTRACT

Burnout measures cover the same ground as depressive symptom scales. Problems with burnout scales include their vulnerability to attribution errors. The few studies having both burnout/stress and psychological symptom measures suggest considerable overlap in the scales. Three cross-sectional studies from very different geographic areas reveal high levels of depressive symptoms or psychological distress in veteran teachers. Correlational evidence using measures of psychophysiologic symptoms, perceived health, job satisfaction, and motivation to continue in the profession indicates that a depressive symptom scale (the CES-D) administered to a group of newly appointed female teachers behaves in much the same way that burnout measures behave. Additional evidence provided by the longitudinal component of the study is consistent with the view that adverse teaching conditions are causally related to depressive symptoms and that the effect size is large. Finally, two of the three components of burnout, emotional exhaustion and a reduced sense of personal accomplishment, are likely to be symptoms of depression; the third component, depersonalization, is reflective of the hostility and friction that characterize the interpersonal relationships of depressed individuals. The paper suggests that burnout may be more fruitfully conceptualized as depressive symptoms that result from adverse work environments. (Author/IAH)

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Abstract

This paper advances the view that "burnout" measures cover the same ground as depressive symptom scales. Problems with burnout scales include their vulnerability to attribution errors. The few studies having both burnout/stress and psychological symptom measures suggest considerable overlap in the scales. Three cross-sectional studies from very different geographic areas reveal high levels of depressive symptoms or psychological distress in veteran teachers. Correlational evidence using measures of psychophysiologic symptoms, perceived health, job satisfaction, and motivation to continue in the profession indicates that a depressive symptom scale (the CES-D) administered to a group of newly appointed female teachers behaves much the same way burnout measures behave. Additional evidence provided by the longitudinal component of the study is consistent with the view that adverse teaching conditions are causally related to depressive symptoms and that the effect size is large. Finally, it was argued that (a) two of the three components of burnout, emotional exhaustion and a reduced sense of personal accomplishment, are likely to be symptoms of depression and (b) the third component, depersonalization, is reflective of the hostility and friction that characterize the interpersonal relationships of depressed individuals. The paper suggests that burnout may be more fruitfully conceptualized as depressive symptoms that result from adverse work environments.

"Burnout" is a term often used in research on teacher stress to describe a syndrome consisting of emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment, resulting from the task of helping unwilling or ungrateful individuals (Cunningham, 1983; Farber, 1984; Gold, 1984, 1985; Iwanicki & Schwab, 1981; Johnson, Gold, & Knepper, 1984; Malanowski & Wood, 1984; Maslach & Jackson, 1981, 1984; McIntyre, 1984; Pierson-Hubeny & Archambault, 1985). The Maslach Burnout Inventory (MBI, Maslach & Jackson, 1981), a commonly employed burnout instrument used with helping professionals, is a source of items for teacher stress questionnaires (Farber, 1984; Fimian, 1983; Fimian & Santoro, 1983). The MBI includes items like "I feel frustrated by my work" and "Working with people directly puts too much stress on me." The respondent is asked to identify the cause of his or her distress from among a limited and nonspecific ("my work," "working with people") set of sources.

A problem with items commonly found in burnout and stress instruments is their vulnerability to attribution errors (Schonfeld, 1990a). It is possible for a teacher to agree with a burnout item asserting that "working with people" is stressful when a teacher feels hounded by an authoritarian principal or when a child with conduct difficulties is frustrating well-planned lessons. The burnout literature tends not to identify specific factors that increase the risk of psychological distress or ill health in teachers.

Construct Validity

The construct validity of burnout measures is also difficult to establish. There is some evidence to suggest that burnout and stress measures cover the same ground as depressive symptom scales. For example, in Hammen and deMayo's (1982) sample of Los Angeles high school teachers a one-item teacher stress measure correlated .63 with the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977; Weissman, Sholomskas, Pottenger, Prusoff, & Locke, 1977), a well-validated measure of current depressive symptoms. If a more

reliable stress measure with additional items were available, the correlation with the CES-D would likely to have been even higher. Belcastro and Hays (1984) compared "burned out" and normal teachers on 12 self-reported illnesses. Although the groups differed on three of the 12 illnesses, depression was the illness on which the groups differed most dramatically. In a study of 780 Canadian teachers (Greenglass and Burke, 1988), Greenglass (personal communication, 1990) found that the MBI was significantly related to depressive ($r = .53$), anxiety ($r = .44$), and somatic ($r = .44$) symptoms. In Meier's (1984) college faculty sample the MBI, the Meier Burnout Assessment, and a self-rating of burnout correlated as strongly with measures of depression as the reliabilities of the instruments permitted.

Considerably more work needs to be completed before the construct of burnout can be demonstrated to be distinct from the psychological distress (Dohrenwend, Shrout, Egri, & Mendelsohn, 1980) measured by depressive symptom scales. Because measures of depressive symptoms, guilt, anxiety, low self-esteem, and psychopsiologic symptoms tend to correlate as highly as their reliabilities allow, Dohrenwend and his colleagues (Dohrenwend et al., 1980; Dohrenwend, Levav, & Shrout, 1986) argued that in the absence of clinical disorder such symptom scales probably measure a construct they called nonspecific psychological distress or demoralization. Moreover, individuals with high scores on depressive symptom scales like the CES-D are at increased risk for clinical depression (Weissman et al., 1978). The extreme distress reflected in high scores on such scales in the absence of clinical depression also constitutes a serious mental health problem (Link & Dohrenwend, 1980).

Distress in Teacher Samples

There have been few studies in which psychological distress (Dohrenwend et al., 1980, 1986) has been examined in teacher samples. In three geographically diverse samples (Hammen & deMayo, 1982, Finlay-Jones, 1986, and Schonfeld,

1990a, 1990b) there is evidence linking psychological distress to the teacher role. In a study of 67 veteran New York City teachers, Schonfeld (1990a) found that adverse school conditions (e.g., underprepared students attending class) were directly related to the frequency of depressive symptoms. Compared to the mean scores (median mean score = 7 - 8) found in 13 different surveys of representative samples of American community residents, the teacher sample had a relatively high mean score on the CES-D, 13.03 (Schonfeld, 1990a). Thirty-two percent of the teachers had scores at or above the "clinical cutoff" of 16, a marker at which individuals are at increased risk for clinical depression (Weissman et al., 1977). By contrast, the median for the community samples was about 17% having scores at or above the clinical cutoff (Schonfeld, 1990a). Eleven percent of the teachers in Schonfeld's (1990a) sample had scores at or above the mean score for psychiatric inpatients, 24 (Radloff, 1977).

These findings are consistent with research showing high levels of distress in the two other teacher samples (Hammen & deMayo, 1982; Finlay-Jones, 1986). Hammen and deMayo (1982), in their study of 75 Los Angeles secondary school teachers, obtained a sample mean for the CES-D of 15.6, a value that is about twice the mean found in community surveys. Forty-five percent of the sample scored at or above the clinical cutoff. Finlay-Jones (1986) employed Goldberg's (1972) General Health Questionnaire (GHQ), a well standardized measure of emotional distress and social dysfunction, in a study of a representative sample of more than 2,000 Western Australian teachers. Finlay-Jones (1986) reported that compared to the Australian community residents on whom the GHQ was normed (Henderson, Byrne, & Duncan-Jones, 1981) about twice the proportion of teachers (17% vs. 9%) showed severe psychological distress, as reflected in symptom scores above a clinical cutoff that was linked to elevated risk for psychiatric illness.

Despite the relatively high scores on measures of psychological distress, there is reason to believe that the teachers in the three samples were likely to be individuals who made relatively successful adaptations to their jobs since the sample did not include individuals who left the profession. According to Kasl's (1983) view, the individuals not found in veteran-worker samples because of attrition are more likely to have been the major casualties of adverse job conditions than the individuals who remained on the job. In a survey of teachers who left the profession, Harris, Kagay, and Leichenko (1986) found that teachers who quit often cited the stressful nature of the job as a factor motivating their leaving. Thus the three studies may have underestimated the extent to which aspects of the teacher role are related to psychological symptoms.

Although the present study does not include measures of burnout (an examination of burnout was not the original purpose of the research), the study does include measures of depressive symptoms as well as factors that have been found to be associated with burnout measures. Such factors include psychophysiologic symptoms, perceived physical health, motivation to leave the profession, and job satisfaction (see Kahill, 1988). If burnout is a surrogate for depressive symptoms, then one would expect a depressive symptom scale like the CES-D to be similarly related to those factors. In Schonfeld's (1990a) study of veteran teachers the CES-D was significantly correlated to psychophysiologic symptoms, job satisfaction, and motivation; perceived health was not measured. The present study examines the relation of the CES-D to the four factors in a sample consisting of newly appointed female teachers.

Since each of the three studies (Hammen & deMayo, 1982; Finlay-Jones, 1986; Schonfeld, 1990a, 1990b) linking teaching to psychological distress was cross-sectional and involved veteran teachers, none of the studies could assess the extent to which a preexisting symptoms accounted for the relation between

the teacher role and distress. The research presented here followed a representative sample of newly appointed teachers longitudinally. Preemployment symptom levels were controlled in an analysis of the relation between school conditions and current depressive symptoms.

Because of an artifact in burnout measures, the relation between burnout and working conditions is likely to be stronger than the relation between depressive symptoms and working conditions. Depressive symptom scales like the CES-D assess symptoms without reference to work or any other hypothesized cause of distress. Burnout scales, by contrast, explicitly refer to difficulties at work and, thus, risk inflating correlations between predictor and outcome. A strong relation between job conditions and depressive symptoms would constitute alternative evidence that what burnout scales tap overlaps with depressive symptoms. In other words, it is not burnout that adverse job conditions engender in teachers (and in other helping professionals) but a more familiar type of distress that is measured by depressive symptom scales.

Data collection

As part of larger study of four graduating cohorts, data were collected on 169 women who graduated from local colleges, divisions of the City University of New York, that are well-known for supplying New York metropolitan area school districts with teachers. Recruitment took place in the spring of 1987 and 1988 in upper-level senior-year education classes that were identified by faculty and administrative informants as likely to include students who would go on to obtain teaching jobs in the September following their graduation. Women who did not become teachers at the time of the fall data collection were excluded from the analyses conducted for this paper. Descriptive data on the women are presented in Table 1. The average age of the women, about 28, is in keeping with University trends concerning the older ages of individuals currently obtaining baccalaureate degrees (A. Blumberg, Office of Institutional Research, City University of New York, personal communication, 1990).

Insert Table 1 about here

Although the women could be followed longitudinally by questionnaire for up to three years, this paper is concerned with data collected at two points in time during the first year of data collection, the summer prior to entry into the profession and the fall of the the teachers' first academic year, four to five months later (about two to three months after the start of school).

The summer and fall questionnaires supplied information on depressive symptoms (CES-D). In the summer, basic demographic data were collected and a social support scale (an 8-item version of Cohen's [Cohen, Karmack, & Mermelstein, 1983; Cohen & Wills, 1985] Likert-type revision of the Interpersonal Support Evaluation List) was administered. In the fall, the teachers were administered the following scales: job satisfaction (Quinn & Staines, 1979; Schonfeld, 1990a), motivation to continue in the profession (Kyriacou & Sutcliffe, 1979; Schonfeld, 1990a), self-esteem (Pearlin & Schooler, 1978), and psychophysiologic symptoms (Cronkite & Moos, 1984; Schonfeld, 1990a). The means, standard deviations, and alpha coefficients for the summer and fall scales are presented in Table 2. One validated item measuring perceived physical health was also included in the fall questionnaire (Segovia, Bartlett, & Edwards, 1989). In addition, the occurrence of nonoccupational stressors in the form of significant fateful but undesirable life events (e.g., the death of a loved one) was ascertained.

Two measures of the adversity of the school environment represent the focal interest of this study: (1) the Episodic Stressor Scale; and (2) the Strain Scale. The Episodic Stressor Scale was calculated by computing the teacher's mean score of the items assessing the frequency with which she encountered episodically occurring stressors (e.g., threat of personal injury,

confrontation initiated by an insolent student, episode of vandalism). Each item was scored: (0) not at all; (1) once per month; (2) one per week; (3) 2-4 times per week; and (4) daily. The Strain Scale was calculated by computing the teacher's mean score of the items assessing ongoing stressors (e.g., overcrowded classroom, unmotivated students attending class, tendency of administrators not to enforce rules against disruptive pupils) or strains (see Pearlin & Schooler, 1978). Each item was scored: (0) not at all; (1) to a minimal extent; (2) to a small extent; (3) to a moderate extent; and (4) to a great extent. Means, standard deviations, and alpha coefficients for the environmental stressor scales are presented in Table 2.

 Insert Table 2 about here

Both the Episodic Stressor and Strains Scales assessed working conditions with neutrally worded self-report items capturing the frequency with which the teacher encountered the condition (see Kasl, 1987). Unlike burnout items which confound distress with job conditions, these items did not tap the extent to which the teacher was annoyed, bothered, or upset by the condition. Thus in the present study working conditions were assessed without reference to symptoms and symptoms were assessed without reference to working conditions.

Findings

The findings are presented in two sections. Correlational findings linking depressive symptoms to factors known to be associated with burnout measures are presented first. Next, the results of two multiple linear regression analyses are presented. In these analyses the fall CES-D was predicted by the school environment with preexisting symptoms and other factors controlled.

1. The relation of depressive symptoms to factors having known links to burnout measures

Table 3 presents the zero-order correlations between the CES-D and other factors measured when the teachers were on the job between three and four months. The CES-D was moderately to strongly related to psychophysiologic symptoms, perceived health, self-esteem, job satisfaction, and motivation to continue in the profession. Each correlation coefficient was in the expected direction.

Insert Table 3 about here

2. The relation between adverse school conditions and depressive symptoms.

In order to examine the influence of school conditions on depressive symptoms, the fall CES-D was regressed on a number of control variables including the preemployment CES-D, and the Episodic Stressor Scale. The other control variables included social class of origin, life events, marital status, race, social support, and age. Only preemployment CES-D ($B = .55$; $Beta = .55$, $p < .0001$) and the Episodic Stressor Scale were significantly related to the outcome ($B = 5.73$; $Beta = .33$, $p < .0001$). The unstandardized regression weight for the Episodic Stressor Scale reveals that a unit increase, as in the difference between classrooms in which episodic stressors occur at a rate of about once per month (a scale score of 1) and classrooms in which stressors occur at a rate of about once per week (scale score of 2), was, on average, associated with a 5.7-point adjusted (for preemployment symptoms, etc.) increase in the CES-D. This adjusted increase, given the normative landmarks of the CES-D (Schonfeld, 1990a), is sizable.

The regression analysis is presented graphically in Figure 1. To draw the graph of the regression equation either the mean or modal values of the control variables were entered. Thus for the equation that was constructed, the mean age of the subjects was entered. Since marital status was dummy coded, and

most subjects were single, rather than entering the mean of the marital status variable, the modal score representing the nonmarried status was entered into the equation. The mean summer CES-D, an important control variable, was also entered. This procedure yielded a regression line for "typical" teachers.

Insert Figure 1 about here

It was expected that the other control variables would not be strongly related to the postemployment CES-D when the preemployment CES-D was controlled since the relation between those control variables and the outcome measure would be absorbed by the preemployment-CES-D/postemployment-CES-D relationship (see Cohen and Cohen, 1983). The R^2 for the equation containing the control variables but not the Episodic Stressor Scale was .38; the R^2 increase when the Episodic Stressor Scale was entered into the regression equation last was .10, a second indication the relation between working conditions and depressive symptoms is large enough to have public health implications.

A parallel set of analyses was conducted with the Strain Scale. The Strain Scale was significantly ($B = 5.16$; $Beta = .32$, $p < .0001$) related to the CES-D controlling for all other factors. The R^2 increase associated with the scale was .09.

The above regression equations constituted concurrent analyses despite the inclusion of control variables (e.g., summer CES-D, social support) that were measured four to five months before the outcome variable, the fall CES-D. The analyses were concurrent because fall symptoms were measured at the same time as school conditions, the predictor of most practical interest. Since the regression analyses were concurrent, the coefficients for the school environment variables could not, by themselves, be used rule out the hypothesis that preexisting depressive symptoms somehow "cause" or pave the way for the

occurrence of hypothesized environmental stressors (e.g., depressed teachers promoting classroom environments conducive to the occurrence of a hypothesized stressor like student rule-breaking: a version of the "event proneness" model described by Dohrenwend and Dohrenwend [1981]). Additional evidence must be adduced. In order to demonstrate the lack of explanatory power of the alternative, event-proneness hypothesis, the zero-order correlations between the summer CES-D and the two fall measures of the school environment are presented. The correlations between summer CES-D and the fall Episodic Stressor and Strain Scales were nonsignificant, $r = .03$, and $.11$, respectively. In other words, the adversity of the fall school environment was more or less independent of preexisting symptoms. The two occasions at which the factors were measured were sufficiently close in time to cast doubt on an event-proneness explanation of the findings.

Discussion

Two sets of findings were obtained. First, the zero-order relations demonstrated that depressive symptoms in newly appointed female teachers are related to factors having known links to burnout measures. Second, the regression analyses indicate that there was a substantial effect of adverse job conditions on depressive symptoms as early as November, the third month of the teachers' careers. The correlation of preemployment symptoms with neutrally-worded self-reports on the work environment was nonsignificant, a finding that is incompatible with an event-proneness explanation of the findings.

The results of the regression analyses are compatible with LISREL (Joreskog & Sorbom, 1989) analyses reported by Schonfeld (1990c). The LISREL analyses indicate that reporting biases in symptomatic individuals do not account for for the relation between depressive symptoms and working conditions. Moreover, the causal models developed in the LISREL analyses were most compatible with

the hypothesis that adverse working conditions strongly influence the development of depressive symptoms in newly appointed female teachers.

The study has a number of limitations. First, the sample includes only new teachers in their first months on the job. The pattern of correlational findings, however, is consistent with findings obtained with veteran teachers (e.g., Greenglass, personal communication, 1990; Schonfeld, 1990a). Second, the subjects were older than "traditional" college graduates; demographic trends, however, indicate that the average age of individuals attending college was increasing during the 1980s, a trend that is expected to continue into the 1990s (Gerald, Horn, & Hussar, 1989; Bruno, 1990). The age characteristics of the participants, although not like that of college students of the 1960s, were in line with recent trends. Third, although the study examined the link between depressive symptoms and some correlates of burnout (e.g., psychophysiologic symptoms, self-esteem), a number of other correlates of burnout were not examined. These include absenteeism, tardiness, turnover, and poor job performance (Kahill, 1988). Future research which will include four teacher cohorts, some of whom will be followed for up to three years, should provide more stable estimates of the effects of job conditions on depressive symptoms. With three years of coverage, data on turnover can also be ascertained.

The present data support the view of burnout writers who argue that difficult job conditions can adversely affect teachers. The findings suggest that the effect might be better conceptualized in terms of depressive symptoms, a well-recognized dimension of psychological functioning, than burnout. The emotional exhaustion, depersonalization, and reduced sense of personal accomplishment associated with burnout, from the perspective presented here, reflect depressive symptoms.

Although high scores on depressive symptom scales do not necessarily indicate major depression, a look at some of the symptoms the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R; American Psychiatric Association, 1987) would have clinicians employ in the diagnosis of clinical depression would be instructive. The DSM-III-R includes a "markedly diminished interest or pleasure in all, or almost all, activities" or "apathy" and "fatigue or loss of energy nearly every day" as symptoms of a major depressive episode. Emotional exhaustion makes reference to these. Belcastro and Hays (1984) found that burned out and normal teachers differed in the frequency of such behaviors as tearfulness, appetite disturbance, and sleep difficulties, depressive symptoms found in the CES-D and/or the DSM-III-R. The DSM-III-R also includes "feelings of worthlessness" as a depressive symptom that suggests a reduced sense of accomplishment. Moreover, the related construct low self-esteem is part of the set of symptoms that usually correlate highly with depressive symptom scales like the CES-D (Dohrenwend et al., 1986). In the present study low self-esteem was moderately correlated with depressive symptoms.

Depersonalization refers to the helping professional's cynical feelings that his or her clients are unworthy and of diminished significance. Although depersonalization is not a symptom of depression, considerable research on depressed individuals indicates that their social interactions are frequently marked by hostility, aversive control, and friction (Coyne, Kahn, & Gotlib, 1987; Coyne, Burchill, & Stiles, in press). It is, thus, probably unwise to elevate burnout to construct status until investigators can demonstrate that it covers ground different from that covered by depressive symptom scales.

Perhaps, a more fruitful way in which to conceptualize burnout is to view it as a syndrome of depressive symptoms that is caused by exposure to a work environment characterized by danger, disappointment, and lack of control.

Qualitative data collected by Blase (1986) and quantitative data collected by Schonfeld (1990a) indicate that many teachers experience problems that reflect an absence of control over their work environment (e.g., student apathy and violence), a risk factor for depressive illness (Seligman, 1975) and injury. Brown and Harris (1978) found that life events that strongly demonstrate to the individual disappointment and thwarted goals are also related to elevated risk for clinical depression. Since the present data set includes items that tap expectations about work and thwarted work-related goals, future analyses will examine the relation between job-related disappointment and depressive symptoms. In addition, the author has recently initiated a study of the relation between teachers' working conditions and the incidence of affective illness. Such a study should shed light on the extent to which adverse working conditions increase the risk for LSM-IIIR depressive disorder.

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Table 1

Descriptive statistics

| <u>Factors</u> | <u>Teachers</u> |
|-----------------------------|-----------------|
| Mean Age | 27.81 |
| Mean Social Class of Origin | 2.70 |
| % Married | 32.0 |
| % White | 69.8 |

Note: Social Class of Origin was measured by Hollingshead's (1974) two-factor index ranging from 1 (professional/managerial) to 5 (unskilled laborers).

Table 2
Means, standard deviations, and alpha coefficients

| <u>Variable</u> | <u>Mean</u> | <u>SD</u> | <u>Alpha</u> |
|--------------------------|-------------|-----------|--------------|
| Summer CES-D | 10.67 | 8.98 | .90 |
| Fall CES-D | 12.37 | 9.00 | .89 |
| Social Support | 3.58 | 0.46 | .79 |
| Psychophys. Sympt. | 9.48 | 6.01 | .78 |
| Perceived Health | 2.23 | 0.84 | na |
| Self-esteem ^a | 1.63 | 0.56 | .86 |
| Job Satisf. | 3.64 | 0.84 | .72 |
| Motiv. to Continue | 3.58 | 0.46 | .89 |
| <u>Stressor Scales</u> | | | |
| Episodic Events | 1.11 | .52 | .82 |
| Strains | 1.26 | .56 | .83 |

^aThis measure is coded such that a high score reflects low self-esteem and a low score, high self-esteem.

Table 3

The zero-order correlations between the fall CES-D and factors expected to be related to "burnout" and/or depressive symptoms

| <u>Factor</u> | <u>r with CES-D</u> | <u>n</u> | <u>p</u> |
|------------------------------------|---------------------|----------|----------|
| Psychophysiologic Symptoms | .68 | 163 | .001 |
| Perceived Health | .37 | 89 | .001 |
| Self-esteem ^a | .46 | 162 | .001 |
| Job Satisfaction | -.45 | 163 | .001 |
| Motivation to Remain in Profession | -.33 | 162 | .001 |

^aThis measure is coded such that a high score reflects low self-esteem and a low score, high self-esteem.

Note. The measure of perceived health was administered in only one of the two cohorts.

Fig. 1.—Graphical representation of the regression of the CES-D on the Episodic Stressor Scale in newly appointed female teachers.

Regression of CES-D on Job Stressors

