Work Stress and Job Satisfaction in Portuguese Health Professionals

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This report is based on a study of Portuguese health professionals in health centers in the northern region of Portugal. The sample is comprised of 114 physicians, 125 nurses and 129 administrative personnel from northern health centers. The subjects were given the Portuguese versions of the Brief Personal Survey, the Job Descriptive Index and the Job in General scales. The data show significant negative correlations between stress responses and the JDI scales, and positive correlations between these scales and reported coping resources. The responses of Anger-Frustration and Depression seem to have the most impact on job satisfaction, in the negative sense.

Introduction

The health of the workforce is an important factor in the productivity and quality of the product or service. Spending for health care, either directly or indirectly, is an important part of the budget of any company or country, and, in fact, has become one of the central issues for management (Keita & Hurrell, 1996). The National Institute for Occupational Safety and Health (1988) has identified psychological disorders as one of the 10 leading work-related diseases in the United States. The most prevalent disabling condition reported by the Social Security Administration, and which accounts for 21% of all allowances, is reported as being mental disorders. In a national survey of American workers, 72% reported that they experienced frequent stress-related physical or mental conditions that could increase health costs (Keita & Hurrell, 1996).

"Mental health professionals seem particularly vulnerable to severe emotional exhaustion and psychological tension" (Kirkcaldy & Siefen, 1991, p. 238). Kirkcaldy, Thome & Thomas (1989) did a study with German psychosocial workers in a variety of settings and concluded that there was evidence of professional burnout, characterized by greater job pressure and dissatisfaction, complaints relating to relationships with co-workers, and an inability to adequately pursue recovery needs or coping strategies. These concepts have prompted systematic studies of the sources of stress and the responses to stress in various occupations (Smith, 1978; Lindstrom, 1992).

Studies indicate that health care organizations, especially hospitals and health centers, constitute work environments with organizational characteristics usually associated with stress, such as multiple levels of authority, heterogeneity of personnel, work interdependence, and high degree of specialization (Calhoun, 1980; Rodrigo, 1995). Another source of stress inherent to health professions is the demand for intense social contact, which has been associated with burnout (Leppanen & Olkinuora, 1987; Pines, Aronson & Kafry, 1981). These researchers suggest that being responsible for people, such as having contact with patients and their families, contact among colleagues and with professional organizations, is more stress producing than being responsible for things.

The most commonly studied stressors in the work stress field include: 1) role stressors such as role conflict and ambiguity; 2) workload stressors such as work overload, tight deadlines, too many hours, and a fast, hectic pace; 3) job insecurity; 4) stressful interpersonal interactions and lack of social support, and 5) lack of control. In terms of being linked to mental and physical health outcomes, the workload stressors, lack of social support and lack of control enjoy the broadest empirical support. (Cooper & Locke, 2000).

Models of stress consistently treat stress as an antecedent to job satisfaction. Bedeian & Armenakis (1981) included tension and subsequently (dis)satisfaction as outcomes of role conflict and role ambiguity. In models of organizational stress research, Ivancevich & Matteson (1980) and Kahn & Byosiere (1994) include job satisfaction as one of the direct outcomes of stress and mention that in a review of studies done on the effects of organizational stress since 1986, by far the most frequently cited response to stress is job dissatisfaction (Kahn & Byosiere, 1992). They go on to say that stress is a common aspect of the work experience and is expressed most frequently as job dissatisfaction, but it finds expression also in more intense and aroused affective states – anger, frustration, hostility and irritation. More passive responses would be boredom, tedium, fatigue, helplessness, hopelessness, lack of vigor and depressed mood. Marshall & Cooper (1979) also include job dissatisfaction as a mental health outcome of stress.

In this study, job satisfaction is defined as the feelings a worker has about his or her job or job experiences in relation to previous experiences, current expectations, or available alternatives (Balzer, Kihm, Smith, Irwin, Bachiochi, Robie, Sinar, & Parra, 1997). Although it was originally thought that workers had only an overall or global feeling of satisfaction about their work, it is now known that employees may feel differently about various aspects of the job including the work itself, pay, co-workers, etc. Job satisfaction has been found to be related to life satisfaction and mental and physical health, improved satisfaction has become an important outcome in its own right (Balzer et al., 1997).

Increased satisfaction may be a bonus to an organization in the form of reduced absenteeism, decreased turnover, and fewer work-related accidents. In addition, job satisfaction has been related to other variables, such as stress and discord within the work group, which may also affect employee productivity (Balzer et al., 1997). Job satisfaction studies have shown relatively consistent, negative and weak correlations with absenteeism and turnover (Cooper & Locke, 2000). To the extent that satisfaction can be improved, organizations can realize substantial monetary savings by reducing costs associated with lower productivity of substitute employees, hiring and training new employees, health insurance claims, and other expenses (Cohen, 1993).

In Portugal, research on job satisfaction and on occupational health is lacking, particularly regarding the health professions. However, there is some evidence that Portuguese physicians and nurses are experiencing considerable stress, especially in terms of burnout and depression (Felício & Pereira, 1994; Loff, 1992; McIntyre, McIntyre & Silverio, 1999). A study investigated job satisfaction in 620 health professionals in Portuguese health centers in the southern region (Graça, 1999) and revealed that doctors were globally more satisfied than nurses and administrative staff. Regarding physicians, the areas of dissatisfaction were salary, confidence in relation to future health policy and in regards to work safety, workload, lack of training on how to deal with stress and having essential resources to be able to do their job. However, to our knowledge, no studies have researched the relationship between stress and job satisfaction in an attempt to determine its antecedents in Portuguese health professionals.

This report is based on a study of Portuguese health professionals in health centers in the northern region of Portugal which determined the sources of occupational stress, stress responses, coping resources and job satisfaction. The data reported here examines the relationship between stress responses and coping resources, and job satisfaction in these professionals considering job stress as an antecedent to job satisfaction. It is expected that there will be significant negative correlations between stress responses and the JDI scales, and positive correlations between these scales and reported coping resources. The most important predictors of job satisfaction are examined.

Method

Subjects

The sample is comprised of 368 physicians, nurses and administrative staff in a random representative sample of the northern health centers: 114 physicians, 125 nurses and 129 administrative personnel were evaluated. On the average, 74.6% of the sample is female and 25.4% male. The mean age of the health professionals is 44.7 and 74.4% of them are married with 85% having and average of 1.59 children (SD=.96).

In terms of professional characteristics, these professionals have 19.96 years of service (SD=9.69), with 14.52 years spent in their current position (SD=9.53). Regarding night shifts, 31.8% indicate this type of work and 45.8% report doing weekend and holiday shifts.

Instruments and Procedures

The subjects were given the Portuguese versions of the Brief Personal Survey (Mauger, 1994), the Job Descriptive Index and the Job in General scales (Balzer et al.), as well as a brief demographic information form.

In order to evaluate the stress responses of the health professionals and their general coping resources, the authors used the Portuguese adaptation of the Brief Personal Survey (McIntyre, McIntyre & Silvério, 1995) a 99-item self-report questionnaire which was developed as a quick screening tool for use in health care settings. The inventory is comprised of two Validity scales (Good Impression and Denial), nine Stress Response Scales which measure the ways in which persons react to stress of which we are using five (Health Distress, Pressure-Overload, Anger-frustration, Depression and Anxiety), and three Stress Resource Scales which evaluate the person's coping resources (Social Support, Existential Resources, Coping Confidence).

The Job Descriptive Index (JDI) is a Portuguese translation of the new revision of the JDI (McIntyre, McIntyre, Silvério, Iglésias & Godinho, 1998). The English version of the JDI is composed of five scales that evaluate facets of job satisfaction which were derived by factor analysis. Each scale has 18 items, except for the pay and opportunities for promotion which have 9 items each. The five scales are

satisfaction with work; pay; opportunities for promotion; supervision; people on the present job. For this study, the satisfaction with people on the present job was transformed in two scales, satisfaction with colleagues and satisfaction with people (clients), each with 18 items.

The Job in General (JIG) scale is a Portuguese adaptation of the English version and looks at the overall, or global long-term evaluation of the job. It is composed of 18 items. As with the JDI, the items are a collection of adjectives and short phrases that summarize feelings about the job. The items are evaluative and global rather than descriptive and specific (in contrast to the JDI) and have a long-term, rather than a short-term, frame of reference.

The sample was randomly selected from personnel lists provided by each institution. The self-report instruments as well as an introductory letter and an informed consent form, were distributed in each service by a representative of each professional group. The sealed envelopes were then returned to the researchers and a code was attributed to each subject to insure confidentiality. The response rate was 70%, being slightly lower among physicians.

Results

The relationship between stress responses, stress coping resources and job satisfaction scales was investigated using Pearson correlation coefficients. The results are presented in Table 1 and confirm the prediction that most stress response scales are negatively correlated with job satisfaction and that the stress coping resources have a positive correlation with the JDI scales.

Table 1 Correlations Between Job Satisfaction and Stress Responses and Resources (N = 366)

Job Satisfaction	Stress Responses				Stress Resources			
	Health Distress	Pressure-Overload	Anger-Frustration	Anxiety	Depression	Social Support	Existential Support	Coping Confidence
Work on Present Job	-.049	-.155**	-.239**	-.172**	-.246**	.196**	.209**	.151**
Pay	-.097	-.016	-.047	-.043	-.062	.014	.109*	-.060
Opportunity for Promotion	.033	-.107	-.208**	.000	-.147**	.115*	.261**	.084
Supervision	-.023	-.069	-.232**	-.116*	-.096	.118*	.122*	.172**
Colleagues	.038	-.086	-.221**	-.056	-.143**	.242**	.112*	.137*
Clients	-.060	-.105	-.122*	-.142**	-.185**	.122*	.235**	.169**
JIG	-.034	-.181**	-.229**	-.167**	-.216**	.227**	.237**	.243**

**Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

Regarding stress responses, low but significant correlations were found between *global job satisfaction and satisfaction with work*, and all the stress responses except *health distress*. Satisfaction with *opportunity for promotion, with colleagues and clients* are also negatively correlated with *anger-frustration* and *depression*. *Anxiety* is negatively correlated with *satisfaction with work, supervision* and *clients*, as well as with *global satisfaction*. The larger correlations are with *anger-frustration* and between *global satisfaction* and *satisfaction with work*, and *depression*. *Satisfaction with pay* did not correlate with any of the five stress response scales.

In terms of *stress coping resources*, small but significant positive correlations were found between the job satisfaction scales *global satisfaction, satisfaction with work, with supervision, with colleagues and with clients*, and the three coping resources, social support, coping confidence and existential resources. *Satisfaction with pay* only correlated with *existential resources* and *satisfaction with opportunities for promotion* only correlated with *social support* and *existential resources*.

In order to ascertain which are the most important stress response predictors of job satisfaction, several forward stepwise regressions were run with the stress response variables (health distress, anxiety, depression, anger/frustration and pressure/overload) as the independent variables, and each of the job satisfaction scales as the dependent variables. The significant regression analyses results are presented in Tables 2 and 3.

The results in Table 2 shows that some *stress response scales* are modest but significant predictors of *global job satisfaction* and some facets of job satisfaction, with the percentage of variance explained ranging from 3% (for *satisfaction with clients*) and 7% (for *satisfaction with work* and *satisfaction with promotion*). *Anger-frustration and depression* were the most significant predictors of *global job satisfaction* and most other facets of job satisfaction. The stress response scales were not significant predictors for *satisfaction with pay*.

Table 2 Significant stepwise regression results for stress response variables as independent variables and job satisfaction scales as dependent variables

Dependent Variable: JIG	R^2 Change	Beta	t	P	sr
Independent: Anger/Frustration	.047	-.22	-3.02	.003	-.16
Depression	.019	-.16	-2.72	.007	-.14
Multiple R = .26; Adjusted R^2 = .06; F(2,363) = 12,84; p = .000					
Dependent Variable: Satisfaction with Work	R^2 Change	Beta	t	p	sr
Independent:					
Depression	.055	-.18	-3.24	.001	-.17
Anger/Frustration	.024	-.16	-3.05	.002	-.15
Multiple R = .28; Adjusted R^2 = .07; F(2,363) = 15.40; p = .000					
Dependent Variable: Satisfaction with supervisors	R^2 Change	Beta	t	p	sr
Independent:					
Anger/ Frustration	.05	-.22	-4.39	.000	-.22
Multiple R = .22; Adjusted R^2 = .048; F(1,364) = 19,30; p = .000					
Dependent Variable: Satisfaction with people	R^2 Change	Beta	t	p	sr
Independent:					
Depression	.032	-.18	-3.47	.001	-.18
Multiple R = .18; Adjusted R^2 = .03; F(1,364) = 12,01; p = .001					
Dependent Variable: Satisfaction with promotion	R^2 Change	Beta	t	p	sr
Independent:					
Anger/Frus.	.04	-.23	-3.97	.000	-.20
Anxiety	.01	.20	3.05	.002	.16
Depression	.02	-.17	-2.75	.006	-.14
Multiple R = .26; Adjusted R^2 = .069; F(3,362) = 9,01; p = .000					
Dependent Variable: Satisfaction with colleagues	R^2 Change	Beta	t	p	sr
Independent:					
Anger/Frus.	.04	-.21	-4.08	.000	-.21
Multiple R = .21; Adjusted R^2 = .041; F(1,364) = 16,64; p = .000					

Table 3 presents the results for *stress coping resources* as predictors of job satisfaction. The results suggest that coping resources constitute a modest but significant predictor of job satisfaction but their importance presents more variation, ranging from 1% of variance explained for *satisfaction with pay* to 9% for *global satisfaction*. It is interesting to notice that *social support* constituted a weaker predictor than either *coping confidence* or *existential resources*, seeming to be more important for the satisfaction with colleagues than in other facets of job satisfaction.

Table 3 Significant stepwise regression results for stress coping resources as independent variables and job satisfaction scales as dependent variables

Dependent Variable: JIG	R^2 Change	Beta	t	p	sr
Independent:					
Coping Confidence	.053	.16	3.02	.003	.16
ExistentialResources	.031	.16	3.00	.003	.16
Social Support	.015	.13	2.47	.014	.13

Multiple R = .32; Adjusted R^2 = .09; F(3,362) = 13.34; p = .000

Dependent Variable: Satisfaction with Work	R^2 Change	Beta	t	p	sr
Independent:					
Existential Resources	.039	.16	3.12	.002	.16
Social Support	.019	-.14	2.70	.007	.14

Multiple R = .24; Adjusted R^2 = .05; F(2,363) = 11.23; p = .000

Dependent Variable: Satisfaction with supervisors	R^2 Change	Beta	t	p	sr
Independent:					
Coping Confidence	.03	.17	3.20	.002	.17

Multiple R = .17; Adjusted R^2 = .025; F(1,364) = 10.21; p = .002

Dependent Variable: Satisfaction with people	R^2 Change	Beta	t	p	sr
Independent:					
Existential Resources	.051	.20	3.84	.000	.20
Coping Confidence	.013	.12	2.27	.024	.12

Multiple R = .26; Adjusted R^2 = .06; F(2,363) = 12.46; p = .000

Dependent Variable: Satisfaction with salary	R^2 Change	Beta	t	p	sr
Independent:					
Existential Resources	.01	.10	1.99	.047	.10

Multiple R = .10; Adjusted R^2 = .008; F(1,364) = 3.97; p = .047

Dependent Variable: Satisfaction with promotion	R^2 Change	Beta	t	p	Sr
Independent:					
Existential Resources	.06	.25	4.87	.000	.25

Multiple R = .25; Adjusted R^2 = .059; F(1,364) = 23.72; p = .000

Dependent Variable: Satisfaction with colleagues	R^2 Change	Beta	t	p	sr
Independent:					
Social Support	.05	.22	4.35	.000	.22

Multiple R = .22; Adjusted R^2 = .047; F(1,364) = 18.92; p = .000

Discussion and Conclusion

Regarding the overall relationships between job satisfaction and stress responses/resources, the results found show that, although modest, significant correlations exist which are in the expected direction, i.e., that negative stress responses are negatively correlated with job satisfaction and that positive stress resources are positively correlated with job satisfaction.

The stress response scales were modest but significant predictors of global satisfaction and most of its facets. These results are in accordance with other studies that connect low job satisfaction with stress symptoms (Firth-Cozens, 1999). However, it appears that there are some stress responses that are better predictors of job satisfaction than others. In this case, people who are angry and frustrated, and/or depressed are likely to be more dissatisfied with their work. Depression and anger have been associated with low job satisfaction and with poor performance and low patient satisfaction (Firth-Cozens and Greenhalgh, 1997; Grol, 1990).

For instance, the scale *Supervision* shows a significant correlation with *Anger-Frustration*. There is evidence that people who are negative, depressed outside of the job are more likely to rate negatively the job itself, i.e. people who come in with a bad attitude will have a bad attitude about their

work, it colors their perspective (Cooper & Locke, 2000). Although important, the stress resources do not seem to play as big a role in satisfaction with one's supervisor.

We can see that the JIG has significant correlations with all scales of the BPS except Health Distress, which is primarily concerned with physical symptoms. It seems that one's physical distress does not predict one's evaluation of job satisfaction whereas most psychological stress responses do, perhaps because psychological well being is more associated with satisfaction. In contrast, Global satisfaction is negatively correlated with *Pressure Overload, Anger-Frustration, Anxiety* and *Depression* (all of which are stress responses).

The stress coping resources seem to be less consistent predictors of job satisfaction. They seem to be particularly relevant for global job satisfaction, satisfaction with work and with clients. It is worth noting that social support was not as significant a predictor as one would expect from the literature (Jones & Fletcher, 1996), being more salient for satisfaction with one's colleagues. A possible explanation is that the Social Support measured by the BPS is support from family and friends and not social support on the job.

To summarize, the data shows evidence of some association between stress responses, stress coping resources and job satisfaction as antecedents of job satisfaction. However, much variance is left to be explained by these sets of variables, which highlights the multidetermined nature of this construct. The responses of Anger-Frustration and Depression seem to have the most impact on job satisfaction, in the negative sense. They may be important areas for intervention. On the other hand, stress resources do have a positive impact on the way that people experience their job and can be valuable in helping to increase one's job satisfaction. More research is needed in order to test different paths in the relationship among these variables.

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