

O R I G I N A L P A P E R S

PSYCHOSOCIAL CHARACTERISTICS OF WORK AND FAMILY AS DETERMINANTS OF STRESS AND WELL-BEING OF WOMEN. A PRELIMINARY STUDY

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Abstract. The present study attempted to identify psychosocial determinants of stress and well-being in occupationally active women. The test group comprised of 98 women both blue- and white-collar workers falling into four occupational categories. The controlled variables - predictors of global stress perceived by women, and well-being with its general assessment included: psychological and physical work demands, job control, anticipation of job loss, assessment of work associates, family function, and stressful life events.

It was found that psychological work demands affected most significantly well-being of women: the higher the demands, the worse the well-being. Job loss anticipation proved to be second among the most important factors affecting well-being of the subjects. At the same time, work insecurity was the most serious factor affecting the perceived stress experienced by women. The significance of the work-related stressors specified above was evidently greater than that of the stressors associated with the family function, although the relationship between family functioning, stress and well-being was also significant. The higher the assessment of the family function, the lower the level of perceived stress and the better the assessment of well-being.

INTRODUCTION

In an attempt to identify the health status determinants, many studies have been oriented towards the health effect of psychosocial work characteristics and the life situation. The essential conclusions on the significance of psychosocial variables, among which the influence of job performed on physical and psychological health

deserves special attention, are based on the studies applying to males (1, 2, 11, 12). The significance of various psychosocial factors may, however, differ in males and females. The traditionally distinct life orientation of females and males, the commitment of females to family and household, may modify the relationship between occupational work and health.

The interest in the effect of psychosocial characteristics of work on the female health has resulted from the fact that employment of women in Western countries becomes more and more popular, and that the difference between the male and female health status becomes less evident. However, the female health status used to be definitely better (19). In Poland the relationship between psychosocial factors and health has not yet been studied thoroughly, although the percentage of occupationally active women in our country has been high for many years. This is associated with the fact that their roles are diversified and that they are subjected to various demands and loads. The necessity to cope with all those demands and loads in the current, generally difficult, socioeconomic circumstances may be very stressful and result in worse well-being.

The aim of our preliminary study was to identify psychosocial determinants of stress and well-being in working women, as well as to assess the weight of these psychosocial variables connected both with the occupational and nonoccupational environment.

MATERIALS AND METHODS

The sample

The sample consisted of 98 women employed in manual and nonmanual occupations (physicians, $n = 14$; industrial outpatient clinic nurses, $n = 40$; financial and economic department officers, $n = 16$ and spinners, $n = 28$). The mean age of the women was 38 (ranged from 22 to 54 years) and the duration of the employment 18 years (ranged from 2 to 36 years). One fourth of the women had only elementary or basic vocational education, about 17% had university education, and the majority of them were graduates of secondary-level schools. Three fourth of the women were married, 80% of women had children, and 9% of them had babies under 3 years old. Availability at the time of the study and their willingness to participate in it, was the only criterion for the selection of the test subjects.

Measurements

Data for this study were collected by a self-administered questionnaire. The questionnaire forms were handed over to the women under study by the members of the research team, and collected by the same team several days later. The questionnaire comprised both Polish translation of questionnaires known in the literature, as well as questions formulated specially for the purpose of this study.

Dependent variables

Perceived stress was evaluated on the basis of a 14-item Perceived Stress Scale by S. Cohen (4). The scale was designed to tap the degree to which situations in one's life are evaluated as stressful i.e. unpredictable, uncontrollable, and overloading.



The subjects indicated the frequency of their feelings and thoughts on a five-point response scale ranged from 0 to 4. The total of the obtained scores produced the result of the assessment: the higher the score, the higher the stress level.

A 28-item version of General Health Questionnaire by D. Goldberg (8) was used to assess psychological health and well-being. Both the results of the separated four scales of the questionnaire (somatic symptoms, anxiety and insomnia, social dysfunction, severe depression) and the overall GHQ-28 score were considered. Scores were obtained by assigning values of 0–3 to responses and summing across items; the higher the score, the worse the well-being.

Independent variables

Psychological job demands and job control are two dimensions of the psychosocial work environment distinguished in the work analysis model, developed by R. Karasek (10, 11, 12, 13) and considered in many studies dealing with stress and health (7, 23). The job demands indicator was constructed to measure psychological stressors, namely job pace, overload, and presence of conflicting demands. Job control reflects both skill and creativity required to perform a job (skill discretion), as well as freedom to make work-related decisions (decision authority) and personal schedule freedom. Job demands were represented in our questionnaire by a block of 9 items, and job control by a block of 13 items. A four-point (1–4) scale was used, and the mean from the scores for each of the two variables was adopted as the assessment index.

Physical job demands included evaluation of hot, cold, temperature changes, dust, smoke and gases, loud noise, necessity for visual strain, lifting heavy loads, carrying heavy loads, inconvenient postures and limited space. Work strenuousness resulting from those demands (if present) was evaluated on a four-point scale and the mean of the scores was taken as the job demand index.

Anticipation of job loss was measured by two items. Sense of current job loss risk and the anticipated difficulties in finding new acceptable job was measured on a four-point scale. The mean of the scores was recognized as the index of the variable.

The function of work associates and family. Two five-item questionnaires designed by G. Smilkstein: Work-APGAR and Family-APGAR were used to measure those two variables (22). Five components of the family and co-worker function are considered in APGAR: Adaptation, Partnership, Growth, Affection and Resolve. Each question asks the respondent to rate her satisfaction with one of those components. Answers are scored 0–2, and scores for five questions added. Higher scores indicate better assessment of the situation, lower scores indicate the family or work associates dysfunction. In the opinion of the questionnaire designer, the assessment may reflect the degree of the support received from the family and co-workers, or possible stress in those two spheres of social contacts.

Stressful life events. Our list of 67 stressful life events was based on PERI Life Events Scale by B.S. Dorendwend and L. Krasnoff (6). The number of events which took place during the previous 12 months, reported by the women was taken as the index of the variable.



Table 1. Means, standard deviations, and intercorrelation matrix of study variables

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1 Psychological job demands	2.32	0.42	—											
2 Job control	2.63	0.53	-0.14	—										
3 Physical job demands	0.82	0.90	xx	xxx	—									
4 Anticipation of job loss	2.84	0.79	0.27	-0.66	xx	—								
5 Work-APGAR	5.72	2.44	0.04	-0.41	xxx	0.26	—							
6 Family-APGAR	5.39	2.09	0.04	-0.18	xxx	xx	x	—						
7 Life events	4.09	2.65	-0.09	0.39	xx	xx	—	x	—					
8 Perceived stress	28.19	6.55	0.23	-0.05	0.27	0.03	-0.19	-0.20	—					
9 Somatic symptoms	9.81	4.74	0.29	-0.21	0.17	0.44	-0.19	-0.31	xx	—				
10 Anxiety, insomnia	9.51	4.80	xxx	-0.09	0.24	0.19	-0.10	-0.28	xx	xxx	—			
11 Social dysfunction	8.94	3.20	xxx	-0.11	0.17	0.25	-0.10	-0.33	0.22	0.57	0.80	—		
12 Severe depression	4.66	4.58	xxx	-0.13	0.08	0.28	-0.10	-0.09	0.14	0.51	0.34	xxx	—	
13 Overall GHQ score	32.92	13.94	xxx	-0.30	0.33	0.24	-0.16	-0.29	0.29	0.53	0.47	0.53	xxx	0.52
			xxx	x	xx	xx	xx	xxx	xx	xxx	xxx	xxx	xxx	xxx
			0.41	-0.20	0.27	0.29	-0.15	-0.32	0.29	0.64	0.84	0.88	0.65	0.48

N = 98 x p ≤ 0.05 xx p ≤ 0.01 xxx p ≤ 0.001

RESULTS

Table 1 presents means, standard deviations, and intercorrelations between the results of all variables. The correlation coefficients pointed to numerous statistically significant correlations existing between the independent and the dependent variables. There was no variable which would be significantly correlated with the evaluation of the perceived stress and, at least, one of the HGQ-28 scale. Although the intercorrelation of the majority of the independent variables proved to be statistically significant, the values of the correlation coefficients show that they are relatively independent.

Table 2. Results of multiple regression analyses (beta weights)

Variables	Perceived stress	total score	GHQ-28			
			A	B	C	D
Physical job demands	-.11	.07	.18	.03	-.12	.08
Psychological job demands	.24 ^{xx}	.33 ^{xxx}	.28 ^{xx}	.24 ^{xx}	.29 ^{xx}	.27 ^{xx}
	.01	.08	.22	.13	-.03	-.09
Job control	.42 ^{xxx}	.26 ^{xx}	.19	.25 ^x	.28 ^{xx}	.15
Anticipation of job loss	-.05	.00	.00	.00	-.03	.02
Work APGAR	-.23 ^{xx}	-.24 ^{xx}	-.23 ^x	-.29 ^{xx}	-.03	-.18
Family APGAR	.18 ^x	.15	.11	.10	.09	.17
Life events	.60	.58	.50	.49	.42	.54
R	.36	.34	.25	.24	.18	.29
R ²	7.28 ^{xxx}	6.62 ^{xxx}	4.32 ^{xxx}	4.05 ^{xxx}	2.80 ^{xx}	5.20 ^{xxx}
F						

x - $p \leq 0.05$

xx - $p \leq 0.01$

xxx - $p \leq 0.001$

A: Somatic symptoms

B: Anxiety and insomnia

C: Social dysfunction

D: Depression

Table 2 shows that the independent variables analysed in the study explained significant amount of variance of perceived stress ($R^2 = .36$) and psychological well-being ($R^2 = .34$). To some lower extent, but still significantly, the variables explained psychological health components, i.e. somatic symptoms ($R^2 = .25$), anxiety and sleeplessness ($R^2 = .24$), dysfunction ($R^2 = .18$) and depression ($R^2 = .29$).

Examination of beta weights for the variables entered into the regression model identified which variables within the predictor set had the most significant influence on experienced stress and well-being.

Job loss anticipation proved to be most positively correlated with stress ($\beta = .42$); this was followed by job requirements ($\beta = .24$), and the number of stressful life events ($\beta = .18$). Negative relationship was observed between the family function and stress ($\beta = -.23$); the higher (i.e. better) the family function, the lower the stress. The positive coefficients were recorded between psychological well-being and job demands ($\beta = .33$) and between well-being and job loss anticipation ($\beta = .26$). The higher score i.e. the worse the assessment of those variables, the higher the score i.e. worse health. The Family-APGAR correlated negatively with well-being ($\beta = -.24$). Job demands proved to be the only variable significantly related with the assess-

ments of all GHQ-28 scales, and the only predictor, out of the whole set of variables, of depression ($\beta = .27$). Job loss anticipation was significantly positively correlated with social dysfunction, anxiety, and sleeplessness, while the family function assessment had negative coefficients in relation to anxiety, sleeplessness, and somatic symptoms. Neither the physical job demand, and job control, nor the Work-APGAR assessment were significant predictors of stress or well-being.

DISCUSSION

The results of the regression analysis show that both the psychosocial characteristics of the women's occupational work and their family life significantly affect experienced stress and psychological well-being. Among the work characteristics analysed in the study, psychological work demands seem to be those which exert the most significant effect on psychological health. The relationship between that group of job characteristics which comprises pressures resulting from the tasks and health have been already observed many times. The results of this study confirm the relationship reported by other researchers, and point to the domination of that variable as a predictor of health, over the remaining variables. Unlike the level of psychological work demands, the range of job control available to the worker facing those demands is expected to be negatively correlated with stress and well-being (10). Those two groups of job characteristics should, according to the opinion of R. Karasek, affect psychological functioning in a different way. It cannot be excluded that low significance of these variables (insignificant beta) for our subjects may be attributed to cultural factors and to the fact that the results apply to women. Inconsistency of the evidence for the relationship between that variable and health can be also observed if one compares the results of other studies, even those obtained by the same author. When investigating a random sample of Swedish white-collar workers, Karasek found (13) that the relationship between job control and various health indicators was stronger for females than for males. When only those employees whose workplaces had been reorganized in the course of last few years were included in the sample, somewhat different pattern emerged. The relationship between job control in that group proved to be stronger for males than for females, especially in relation to females aged 20-39 (14). It seems that the impact of this particular work aspect on health, both physical and mental, can be modified by numerous socioeconomic factors.

Anticipation of job loss is the second most important factor after psychological work demands that affects significantly well-being of women under study, and the first most important factor contributing to the stress experienced by them. Work insecurity is regarded to be a strong stressor by many authors. Results of some studies indicate that anticipation of future job loss may be as traumatic as unemployment (20, 21) like in Lazarus' thesis that the anticipation of harm can yield effects as potent as the experience of the harm itself (16). Employment of women in Poland results primarily from economical reasons. According to the analysis performed by the Central Statistical Office (1989), only a few per cent of women attempt to find satisfaction in their occupation. Loss of employment by women is, therefore, associated with a significant lowering of their family life standard. Besides, the former political system ensured work security. The threat related with the



transformation of the political system and complete restructuring of Polish economy, was perceived by the society in 1991 as an entirely new situation. The new situation and the economic reasons for being employed certainly contributed to an increased significance of the anticipated threat.

The quoted occupational stressors have dominated over the significance of the family function, although there was a significant correlation between the satisfaction from the family function, stress and well-being. The better the subjective assessment of the family, the lower the stress and the better the psychological health. Our results derived from the comparison between the significance of work and family proved to be inconsistent, to some extent, with those obtained by D.B. Kandel et al. (9). They found that strains and stress in women's family life yielded more negative consequences than occupational strains and stress. It seems that a multi-sided orientation of women results in a diminished significance of their family life. Only a small proportion of women under study declared their complete family involvement, while for the majority of them both family and occupation were equally important. The problem of life orientation of the studied women was discussed in some greater detail elsewhere (15).

When compared the significant relationship between the discussed variables, stress and well-being, the significance of stressful life events has proved to be relatively small. This variable, unlike the remaining ones, is rather objective than subjective reflection of the situation, as the rating of quality of those events was not considered. It is generally known that the results of qualitatively different measurements are usually less correlated (17, 18). The events indicated by women did not necessarily produce sustained effects, and some of those events were relatively distant from the period of our assessment of stress and well-being.

The entire sample was not homogenous. The subgroups differed from each other in many variables, depending on the occupational categories to which they had been classified. Significant differences were found, first of all, between the spinners and the remaining women. The spinners obtained the lowest job control index, the highest job insecurity index, the worst family function and co-worker group assessments and the highest number of stressful life events. At the same time, this group of women had the least satisfactory general assessment of well-being. When the results of GHQ-28 scales had been considered, it became evident that the spinners had significantly higher depression index (by two times), this is consistent with the reports on the relationship between depression, and low level of education and low economic status (3, 5). There were no significant differences between the groups in the remaining scales contributing to the general assessment of well-being and stress level¹. Such an observation suggest, therefore, that the independent variables considered in the study can explain well-being and stress in the spinners better than in the remaining groups of women.

In the future studies and analyses it should be necessary to consider the type of work performed by women. The relationship between the psychosocial characteristics of work and life, on the one hand, and well-being on the other, may prove to be different for female workers involved in manual and non-manual occupations.

¹Data available at the request addressed to the author.

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