

Work organization, well-being and health in geriatric care

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Abstract. The objective of the present study was to explore the connection between the organization of work in geriatric care and factors which have been connected to job stress and burnout, i.e. exhaustion, mental workload, job satisfaction and communication. We also analyzed how these factors were related to employee visits to doctors during the previous 12 months due to various medical conditions. The study was a cross-sectional questionnaire distributed to all employees within nursing homes and geriatric hospital wards with 10 employees or more throughout Iceland. The total response rate was 80%. The majority of respondents, or 96%, were women ($n = 1432$), and the results are based on their answers.

Our data show that there is a high correlation between mental exhaustion and the unsatisfactory organization of work. Mental exhaustion upon completing work shifts was more closely connected to the health outcomes studied than were the other work-related factors studied. This is especially true for chronic fatigue, depression and sleeping disorders.

It is important that employers and managers notice the mismatches between work and workers that this study manifests. Employers and managers must also consider the organizational factors that are influential.

1. Introduction

According to many studies, occupational stress, burnout, and fatigue are widespread problems in western societies [10,12,15,20]. Cox and Rial-Gonzalez, Grint, and Marslach and Leiter are among those who associate these problems with fundamental changes occurring in the workplace and in the nature of work in the past few decades, i.e. the shift from physical workload to mental workload [1,5,15]. Many factors must be taken into account to understand this process. Besides work-related and organizational factors, the changing social, cultural and ideological context has to be analyzed. The increased utilisation of information and

communications technology, globalisation of the economy, changing structure of the work force, and increasing flexibility of work are also of importance [5,20]. Occupational stress and burnout might be partially explained by the growth of the human service sector, in which many women are employed [4]. Even though the concept of burnout has recently been expanded to cover many other professions, it was initially relevant only to occupations involving work with people [2,20]. Employees in these professions run a particularly high risk of experiencing excessive mental workload because of the emotional demands they face in their daily jobs with people [4]. But while Schaufeli and Enzmann mention increased individualisation, anonymity, and disconnectedness as reasons for occupational stress and burnout, they postulate that a further reason these problems are more visible today than they were decades ago is that people are now more inclined to describe their problems in psychosocial terms [20].

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Prior research on stress and burnout concludes that the exhaustion component represents the basic individual stress dimension of burnout and is the central quality and most obvious manifestation of this syndrome (see e.g. Schaufeli and Enzmann) [20]. In our study, therefore, we specifically analyse the connection between exhaustion among employees in geriatric care and several organizational factors at work. In addition, we analyzed the employees' perception of mental difficulty, job satisfaction and communication with patients – factors which are often associated with both stress and burnout – as well as mental exhaustion [8,14,18,20]. To further explore this issue, the study examined the connection between these factors and employee visits to doctors during the past 12 months due to various medical conditions.

2. Work organization and psychosocial well-being

According to Schaufeli and Enzmann, burnout in “normal” individuals is a persistent, negative, work-related state of mind [20]. It is primarily characterized by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviors on the job. This psychological condition develops gradually and may thus remain long unnoticed by the individual involved. The condition results from a discrepancy between intentions and reality at work, and the distress of the employee is inherently related to the work.

Mental exhaustion is considered to be the most obvious manifestation of the burnout syndrome and the basic individual stress dimension of it [9,20]. Exhaustion refers to the feeling of being emotionally overtaxed and drained of one's emotional and physical resources [21]. Schaufeli and Enzman argue that exhaustion is not something that is simply experienced; rather, it prompts personnel to distance themselves emotionally and cognitively from their jobs, presumably as a way to cope with the work overload [20]. Within the human services sector, the emotional demands of the occupation can exhaust employees' capacity to be involved with, and responsive to, the needs of service recipients. De-personalisation is an attempt to put distance between themselves and the recipients by actively ignoring the qualities that make the recipients unique, engaging people. The demands made by them appear more manageable when they are considered as the impersonal objects of an employee's work. Distanc-

ing is such an immediate reaction to exhaustion that a strong relationship between exhaustion and cynicism or de-personalisation is consistently found in burnout research, across a wide range of organizational and occupational settings [14,20,24].

Burnout researchers have studied quantitative job demands (e.g., having too much to do in too little time with too few resources), with the findings supporting the general notion that burnout is a response to overload. Experiences of work overload and time pressure are strongly, consistently related to burnout, particularly the exhaustion dimension [14,15,17]. Studies on qualitative job demands have focused primarily on role conflict and the lack of adequate information for completing tasks, both of which consistently show a moderate to high correlation with stress and burnout [14]. In addition, burnout researchers have investigated the absence of job resources. The resource that has been studied most extensively is social support, and a strong, consistent body of evidence now shows that a lack of social support affects people's well-being and health. According to Searle, lack of support from supervisors is especially significant in this respect, even more than lack of support from co-workers [22]. A lack of feedback is consistently related to burnout, according to Maslach et al. [14]. The rate of burnout is also higher among people who have little latitude for making decisions [7].

Hallsten [8] defines burnout as a form of depression resulting from the process of burning out, while several findings [14,20,22] have established that burnout is more job-related and situation-specific than general depression [20]. However, individuals risking depression are more vulnerable to burnout, and it seems that burnout can be regarded as a consequence as well as a cause of depression [14,20]. It can nonetheless be argued that this line of reasoning is equally true for any other medical condition affected by the psychosocial environment.

3. Aims of the study

The aims of the study were to analyze the frequency of the self-assessed well-being among personnel in geriatric care, as measured by the following four factors: mental exhaustion, whether the job is considered mentally difficult, job satisfaction, and communication with residents or patients. In addition, we analyzed the relationship between several organizational factors in the workplace and these self-assessed well-being of the

employees. Finally, we analyzed worker well-being in relation to whether employees had within the past 12 months consulted a doctor concerning any of several self-reported medical conditions.

4. Research design

The population of Iceland is small – only 300,000. However, Icelandic society has all the characteristics of a typical Nordic welfare state. Participation by women in the labor market has been growing in recent decades and in 2000 was 76.7% among women aged 16–74 [23]. This is one of the highest female employment rates in the world. The labor market is characterized by clear gender segregation. In 2002, women accounted for 19,100 of the 22,100 individuals employed in social work and the health service sector [23].

Because of Iceland's small size, it was convenient to do a nation-wide study among all employees in nursing homes and geriatric hospital wards with 10 or more employees. A total of 1886 questionnaires were distributed during the period from the morning shift on November 1, 2000 until the morning shift of November 2, 2000. Sixty-two nursing homes and geriatric hospital wards were involved. As there are a number of personnel in this field who do not speak Icelandic, the questionnaires were both in Icelandic and English.

The study was based on a cross-sectional, for the most part four-faceted questionnaire with 84 items. The possible answers were: "Yes, generally", "Yes, sometimes", "Yes, but not often" and "No, never". The questionnaire revealed demographic variables, musculoskeletal symptoms, psychosocial factors, the workplace environment, health behavior, and prior medical history. Questions on psychosocial factors were based on the General Nordic Questionnaire for psychological and social factors at work [13] while questions on musculoskeletal symptoms were based on another standardised Nordic questionnaire [11]. Further questions were asked on perceived well-being and health, the work environment, and visits to a doctor during the past year. The questionnaires were distributed in each workplace and subsequently returned to the Administration of Occupational Safety and Health by persons designated at the workplaces. The response rate was 80% ($n = 1515$); the total institutions were 62 nursing homes and geriatric hospital wards. The majority of respondents, or 96% ($n = 1432$), were women, and the results are based on their answers, as mentioned above. Four percent of the employees answered in En-

glish. The mean age of the respondents was 45 years, with the ages ranging from 14 to 79 years. Registered nurses accounted for 16% of the respondents, practical nurses 20%, unskilled attendants 44%, cleaning technicians 8% and others 11%. Supervisors accounted for 12% of the overall personnel, skilled workers 30% and unskilled workers 58%. The majority of the employees (71%) were married, 15% were single, 9% divorced and 4% widowed. Fifty-five percent had worked five years or less in geriatric care, whereas 27% had worked 10 years or longer. The difference in proportions was assessed using chi-square. Odds ratios (OR) was applied for calculating correlation. The level of significance was set at 95%.

5. Results

The study analyzed the well-being of workers by measuring mental exhaustion and whether the work was considered mentally difficult, along with job satisfaction and communication with the residents or patients. When the female employees were asked about mental exhaustion, 10.7% of them ($n = 145$) said they generally were mentally exhausted after their shifts and 43.9% ($n = 598$) that they sometimes were. When asked if their work was mentally difficult, 10.4% ($n = 149$) of the employees said it was very difficult mentally, and 45.8% ($n = 656$) that it was somewhat difficult. Most of the employees, nevertheless, were satisfied with their jobs. About 29% ($n = 396$) were very satisfied and 64% ($n = 866$) somewhat satisfied. Regarding communication at the workplace, 35.1% ($n = 503$) of the women said that they could usually communicate sufficiently with the patients and 27.2% ($n = 390$) that they sometimes could.

5.1. Work organization and well-being

Mental exhaustion after work shifts was associated with a number of organizational factors (Table 1), most notably time pressure (OR 3.4), dissatisfying communication with supervisors (OR 2.7), and dissatisfaction with the hierarchy at work (OR 2.7). The ORs between mental exhaustion and the feeling that it was difficult to harmonize the demands and expectations of patients/employees/supervisors were higher than 2. This was also true for having been subjected to harassment, violence, or threats at work and for feeling that suggestions on added efficiency were not taken into account.

Table 1
Crude odds ratios (OR) and 95% confidence intervals (95% CI) for organizational factors at work according to the extent of being mentally exhausted after shift and finding work mentally difficult

Questions on work	Mentally exhausted after shift		Find work mentally difficult	
	OR	95% CI	OR	95% CI
Mentally monotonous	1.1	0.885–1.354	1.1	0.915–1.408
Difficult to harmonize demands and expectations of patients/employees/supervisors	2.3***	1.804–3.012	2.8***	2.146–3.715
Dissatisfied with flow of information at work	1.9***	1.451–2.430	1.6***	1.248–2.165
Not praised for good work	1.7***	1.376–2.178	1.5**	1.158–1.848
Low professional support	1.7***	1.334–2.138	1.6***	1.221–1.989
Insufficiently consulted when changes are planned	1.4*	1.144–1.777	1.5**	1.178–1.849
Unsatisfactory hierarchy at work	2.6***	1.766–3.978	3.0***	1.929–4.690
Significant time pressure	3.4***	2.641–4.347	3.2***	2.530–4.141
Suggestions on efficiency not taken into account	2.1***	1.608–2.754	1.8***	1.371–2.386
Little job security	1.7***	1.277–2.366	1.7**	1.227–2.331
Lack of solidarity at work	1.9***	1.458–2.470	1.6***	1.235–2.124
Harassment, violence or threats at work	2.0***	1.582–2.578	2.1***	2.915–3.223
Dissatisfying communication with supervisors	2.7***	1.783–4.144	3.2***	2.013–5.126
Dissatisfying communication with co-workers	1.6	0.906–2.749	1.3	0.708–2.211

Significance levels: * = 0.05, ** = 0.01, and *** = 0.001.

Table 2
Crude odds ratios (OR) and 95% confidence intervals (95% CI) for organizational factors at work according to the extent of job (dis)satisfaction and (in)sufficient communication with residents or patients

Questions on work	Generally (dis)satisfied with job		Feel communication with residents/patients (in)sufficient	
	OR	95% CI	OR	95% CI
Mentally monotonous	3.8***	2.411–6.147	1.4*	1.101–1.751
Difficult to harmonize demands and expectations of patients/employees/supervisors	4.7***	2.9354–7.107	2.8***	2.181–3.634
Dissatisfied with flow of information at work	3.6***	2.187–5.776	2.1***	1.648–2.774
Not praised for good work	3.5***	2.2196–5.464	2.2***	1.709–2.758
Low professional support	4.2***	2.645–6.657	1.8***	1.376–2.229
Insufficiently consulted when changes are planned	2.3***	1.432–3.671	1.8***	1.419–2.283
Unsatisfactory hierarchy at work	7.3***	4.576–11.759	2.4***	1.898–3.936
Significant time pressure	2.1**	1.180–3.567	2.1***	1.573–2.743
Suggestions on efficiency not taken into account	2.8***	1.183–4.420	1.7***	1.305–2.217
Little job security	3.1***	1.975–5.008	1.1	0.819–1.528
Lack of solidarity at work	9.4***	5.847–15.164	1.3*	1.032–1.756
Harassment, violence or threats at work	2.4***	1.528–3.635	1.4*	1.063–1.746
Dissatisfying communication with supervisors	12.4***	7.752–19.858	2.3***	1.606–3.403
Dissatisfying communication with co-workers	15.7***	8.797–27.941	2.6***	1.527–4.496

Significance levels: * = 0.05, ** = 0.01, and *** = 0.001.

The feeling that people's jobs were mentally difficult was associated with a number of organizational factors (Table 1), most notably significant time pressure (OR 3.2), dissatisfying communication with supervisors (OR 3.2), and dissatisfaction with the hierarchy at work (OR 3.0). Having difficulty harmonizing the demands and expectations of patients/employees/supervisors and having been subjected to harassment, violence or threats at work yielded ORs of 2.8 and 2.1, respectively.

Job dissatisfaction was associated with all the organizational factors mentioned in Table 2. The OR was highest for communication factors, especially dissatisfying communication with co-workers (OR 15.7)

and dissatisfying communication with supervisors (OR 12.4). The OR was also high for lack of solidarity at work (OR 9.4) and a dissatisfying hierarchy at work (OR 7.3).

The feeling that communication with residents/patients was insufficient also linked to all the organizational factors except job security, but most notably to difficulty in harmonizing the demands and expectations of patients/employees/supervisors (OR 2.8), to dissatisfying communication with co-workers and supervisors (OR 2.6 and 2.3), and to a dissatisfying hierarchy at work (OR 2.4).

Table 3

Odds ratios (OR) and 95% confidence intervals (95% CI) for illnesses and the extent of being mentally exhausted after shift sometime during the previous 12 months

Questions on work	Mentally exhausted after shift		Find work mentally difficult		Dissatisfied with job		Feel communication with patients insufficient	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Muscular rheumatism	1.4***	1.146–1.775	1.3*	0.161–1.657	0.1	0.576–1.362	1.1	0.855–1.357
Fibromyalgia	1.8*	1.091–2.818	1.1	0.669–1.693	0.7	0.257–1.678	1.0	0.597–1.567
Back problems	1.6***	1.283–2.132	1.6***	1.211–2.036	1.2	0.774–1.990	1.0	0.781–1.335
Chronic fatigue	2.1***	1.389–3.368	1.4	0.892–2.112	1.6	0.850–3.055	1.2	0.812–1.905
Irregular heartbeat	0.9	0.612–1.292	0.9	0.640–1.379	0.9	0.452–1.822	0.8	0.556–1.261
Spastic colon	1.1	0.756–1.664	0.9	0.637–1.411	1.3	0.696–2.585	1.3	0.853–1.927
Headache	1.5**	1.088–1.959	1.1	0.818–1.479	1.3	0.795–2.212	0.9	0.672–1.254
Sleeping disorders	2.0***	1.433–2.897	1.6**	1.147–2.349	1.3	0.762–2.346	1.2	0.837–1.675
Depression	2.2***	1.496–3.193	1.7**	1.140–2.450	1.6	0.915–2.844	1.3	0.909–1.895
Anxiety/tension	1.7**	1.179–2.379	1.5*	1.065–2.194	1.6	0.914–2.791	1.3	0.922–1.869

Significance levels: * = 0.05, ** = 0.01, and *** = 0.001.

5.2. Well-being and health outcomes

There were obvious connections between being exhausted after one's shift and having consulted a doctor due to various medical conditions (Table 3). The employees who felt most often or sometimes mentally exhausted after shifts were more likely to have seen a doctor because of depression (OR 2.2), chronic fatigue (OR 2.1), sleeping disorders (OR 2), fibromyalgia (OR 1.8), anxiety/ tension (OR 1.7), back problems (OR 1.7), muscular rheumatism (OR 1.4), and headaches (OR 1.5).

There was also a connection between the feeling that one's job was mentally difficult and having consulted a doctor because of various types of illnesses, although these links were not as outstanding. The employees who felt their occupations were very or rather difficult were more likely than the others to have consulted a doctor due to depression (OR 1.7), sleeping disorders (OR 1.6), back problems (OR 1.6), and anxiety/tension (OR 1.5).

Generally, these assorted reasons for medical consultation did not appear to be connected with job dissatisfaction or insufficient communication with residents/patients.

6. Discussion and conclusions

The present study, like that of Schaufeli and Enzmann [20], indicates that feeling mentally exhausted is an important variable in the interplay between work organization and worker well-being. But this is also the case for the other variables we tested (i.e., finding work mentally difficult, job dissatisfaction and insufficient communication with patients/residents). Signifi-

cantly, the study also showed that mental exhaustion after shifts is strongly connected to health outcomes, and has more impact in terms of health than job satisfaction, communication with supervisors and co-workers, or finding work mentally difficult. This is especially true for such stress-related health outcomes as chronic fatigue, depression, and sleeping disorders.

When analysing organizational factors, we found, as did Maslach and Leiter [15] and Maslach et al. [14], that time pressure influences employee well-being. In our study, time pressure was the organizational factor that had the highest correlation with both mental exhaustion and finding work mentally difficult. The association between mental exhaustion and finding work mentally difficult on the one hand, and dissatisfying communication with supervisors on the other hand, was high in our study, as in Searle's study [22], and considerably higher than the association for dissatisfying communication with co-workers. However, the OR was highest between dissatisfaction in work and dissatisfying communication with supervisors or co-workers. It is possible that these three variables express much the same feeling among employees. Job dissatisfaction was also highly associated with a lack of solidarity.

A number of empirical studies have been carried out on stress and burnout. The critique has been put forward that they have failed to produce much knowledge, even though a great deal of data has been collected on the topic in the last 20 years, not only regarding research on burnout, but also concerning studies on such topics as the psychosocial risk factors for musculoskeletal symptoms [10]. We are well aware of this criticism and of the weaknesses of cross-sectional studies, where cause and effect are measured at the same time [3,10,16]. Despite that, the strength of the present study, and what distinguishes it from other studies in the field, is

that it was carried out on a nation-wide basis, among employees in every geriatric nursing home and geriatric hospital ward in Iceland with 10 employees or more. The number of participants was sizeable and the response rate of 80% quite acceptable. Thus, the result that employees' feeling mentally exhausted was the symptom most closely linked to varied types of health outcomes which are potentially related to occupation is of great importance, especially on the public health and social service level. So is the result that even if mental exhaustion is connected to many organizational factors, the OR is highest between the exhausted feeling and great time pressure, dissatisfying communication with supervisors, dissatisfaction with the hierarchy at work and difficulty in harmonizing the demands and expectations of patients/employees/supervisors. These findings should provide grounds for setting aside resources to tackle the problems.

Saksvik et al. point out that many health interventions in the workplace have failed in the past years [19]. However, the present study underscores the importance of conducting trials on prevalent problems like the ones presented here, so as to reduce the unnecessary suffering of employees. It is crucial that employers and managers, when introducing health promotion programs, take notice of the mismatches between work and personnel which are manifested in this study and consider the organizational aspects which are influential in that respect.

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