

Work organization and well-being of Finnish health care personnel

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In 1988 there were about 169 000 persons working in the health care sector in Finland. This number included both qualified health professionals and untrained personnel. The biggest occupational groups were registered nurses (35 000), practical nurses (22 000), physicians (9000), pediatric nurses (7000), and mental health nurses (5000). Women dominated the health care profession. Only among the physicians was over 50% men, but the majority of the under 30-year-old physicians was already women. The pediatric nurses and physiotherapists were the youngest. In 1988 there were 18.9 actively working physicians and 7.4 dentists for each 10 000 inhabitants (1).

The Finnish health care system is almost entirely public. About 40% of the physicians also work in private practices, although only 8% of them do it full-time. About half of the physicians, one-third of the registered nurses, more than half of other health care personnel, and one-third of the other personnel are employed by hospitals, and the rest work in public outpatient clinics. The objective of this review is to describe research results dealing with the work organization, work content and well-being of Finnish health care personnel and the interventions made to improve and develop work organization and well-being. The available research results do not give a representative picture of the work conditions, however, because a comprehensive survey for the branch is lacking. The review is therefore based on the results of studies dealing with separate occupational groups, specific types of health care institutions, and local intervention schemes (tables 1 and 2).

Well-being of various occupational groups

Health care work has been seen as mentally loading; 73% of the workers consider it rather or very loading, as compared with 46% of the general Finnish working population.

The main sources of job stress in this sector are time pressure, repeated routines, use of one's personality

as a worktool, responsibility, lack of autonomy or control, and shift work.

Time pressure, amount of work, and being on duty are the main stressors among Finnish physicians (2). These stressors are the greatest among those just beginning their career. The severest indicators of strain are the burnout syndrome, increased alcohol consumption, and suicidal thoughts. In general, control over one's own work is high for physicians, and this finding can be seen as protection against negative stress effects (3). Dentists also have mentally and socially demanding work, but it is also physically heavy.

Head ward nurses have much administrative work. Their role is somewhat ambiguous, being hierarchically situated between the head nurse and other nurses (4).

Nursing can be defined as work done by trained nursing personnel. It includes primary care, interaction with patients, communication of information, and administrative and office work. All nursing groups perceive the interaction with patients as simultaneously rewarding and loading. Mental health nurses have the most direct patient contacts. They see their roles as a guard and a therapist as conflicting. In addition the threat of physical violence is a potential stressor. Their influence on their own work situation is, however, limited (5).

Registered nurses have administrative and managerial duties. The responsibility for the patients is high, and especially in operating rooms and outpatient clinics the work is controlled by external factors (6).

Practical nurses are involved mostly in primary care tasks. In chronic health care settings their work, however, includes also more interaction with the patients and administrative work (6).

Nurse's aides usually have few contacts with patients. Their work includes repeated daily routines with little control over their own work situation (7).

Shift work has been perceived to have more negative health effects among nurses than among industrial workers (8). The biggest problems have been disturbed sleep, continuous fatigue, and stomach trouble. Adverse effects on family life and outside work activities are also experienced. However, the nurses have adjusted their life-style to shift work.

In a study of municipal employees (9) nurse's aides (31%), female mental health nurses (29%), and dentists (26%) experienced the most psychological symptoms.

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Well-being at the organizational level

The analysis of the health care organization was based on studies on the organizational culture in municipal health care centers (10), job analyses conducted within the health care organization (11), an analysis of the entire Finnish health care system (12), and organizational development interventions (13) in these organizations.

The health care organizations are hierarchical, bureaucratic, and professional (10). Professional organizations emphasize professional qualification and personal autonomy. Being service-oriented, the health care organization should, however, be flexible and act in accordance with patients' needs. The health care organizations are, however, specialized according to disease categories and the specialization of the person-

Table 1. Studies on various occupational groups in health care.

Reference	Study group	Methods	Content areas
Huhtanen et al 1991 (3)	Aging workers in municipal occupations (physicians N = 74, dentists N = 76, nursing work N = 660, hospital aides N = 160, head nurses N = 210)	Questionnaire, AET (Arbeitswissenschaftliche Erhebungsbogen zur Tätigkeitsanalyse)	Mental job demands, physical job demands, change at work
Eskelinen et al 1991 (9)	Aging workers in municipal occupations (same groups as above)	Questionnaire	Stress symptoms, chronic diseases, job stressors
Strid et al 1988 (2)	Physicians N = 2671 (hospitals 50%, health care centers 25%, others 25%)	Questionnaire	Job stressors, strain and burnout, mental health
Ahtainen 1989 (4)	Head ward nurses N = 190 (from various kinds of health care settings)	Questionnaire	Task analysis, job satisfaction, work organization and content
Kivinen & Lehtonen 1984 (11), Kivinen et al 1985 (6)	Nursing work (practical nurses N = 648, specialized nurses N = 691)	PAQ-job analysis, questionnaire, interviews	Task analysis, work organization, cooperation, mental work load
Pöyhönen & Olkinuora 1988 (5)	Psychiatric health care personnel N = 341 (physicians, nursing personnel, other personnel)	Questionnaire, group work	Job demands, job strain, burnout, developmental proposals
Kinnunen et al 1991 (14)	General hospital personnel N = 550 (nursing work 72%, physicians 5%, hospital aides 13%, others 10%)	Questionnaire	Mental well-being, job demands, organizational climate, strain and job satisfaction
Olsson et al 1990 (8)	Shift work (nurses N = 30, industrial workers N = 30 + 30)	Interview, questionnaire, clinical, psychological assessment	Shift work, coping strategies, mental well-being, life-style

Table 2. Interventions made in health care organizations.

Reference	Study group	Methods	Content areas
Pöyhönen 1987 (15)	Hospital for criminal psychiatric patients N = 341	Problem lists, interviews, questionnaire, feedback, training	Mental and social stress, coping strategies, vulnerability, life situation, mental health
Kivimäki & Lindström 1991 (7)	General hospital (units of medicine, obstetrics and gynecology, and first aid N = 336, 14 units)	Questionnaire, interviews, feedback, process consultation	Organizational climate, job stress, mental well-being
Engeström 1987 (13)	Municipal health care center (two health care centers, including their personnel and patients)	Historical analysis, stimulated recall, thematic interviews, action research with intervention	Historical development of activity, quality of services, disturbances in organization, inner contradictions, mental models
Vohlonen 1988 (17)	Family physician programs (general population N = 9000, patients N = 1900 + 2600, doctor visits N = 16 000, physicians N = 100, other personnel N = 700, units N = 15)	Survey of personnel and population, interviews and group discussions, analysis of documents, observations	Work organization, intervention program, satisfaction, evaluation of feasibility, adequacy, effectiveness
Leino 1991 (16)	Nursing personnel for older chronic patients (two bed wards N = 24 + 24)	Questionnaire, interview, analysis of work process, process consultation	Work organization, work routines, team building

nel. This specialization is closely linked to the power structure of the organization. Cooperation takes place within professional groups. Discussion and cooperation between occupational groups is infrequent. The division of work is based on a rationalized mass production model.

The values of physicians have been found to be based on individual clinical diagnosis and therapy. Nurses are task-oriented and measure-oriented. Political and economic values characterize managers and administrators in health care organizations, but physicians and nurses are of the opinion that these did not concern them at all.

The organizational climate has been classified into four different types in a general hospital. In the supportive climate, job satisfaction was found to be the highest and the number of strain symptoms the lowest. In the busy climate the work load and physical strain were the highest. The neutral climate type had no specific characteristics. A structurally unclear climate was associated with problems of responsibility and a lack of influence over one's own work situation (14).

A recent study in a general hospital showed that the main organizational problems were the lack of knowledge of the goals of the whole hospital, poor communication between different wards, and too little feedback from co-workers and supervisors. When asked about the wishes for future development, the personnel wanted to improve especially their social work climate and cooperation, external work conditions, services for the personnel (housing, day care for children, occupational health services) and leadership practices (7).

Interventions in organizational development

Job redesign and interventions in organizational development in Finnish health care organizations have been mostly local and practical in nature. Therefore, little is known about their impact on organizational functioning or on the well-being of the workers. Some more theoretically based approaches have also been tried, however. They are (i) survey-feedback interventions for reducing occupational stress (15), (ii) process consultations at the working group and team level (7, 16), (iii) cognitive approaches emphasizing the analysis of contradictions and learning (13), and (iv) family physician programs (17).

The survey-feedback interventions have been based on job stress models. The interventions attempted to reduce individual strain and improve work organization, which was seen as a source of job stress. (See, eg, reference 5.) In most of these studies both the interventions and the evaluation of the effect of the intervention have been poorly documented or documentation is totally lacking.

The Finnish Institute of Occupational Health has developed an organizational development model based on the job stress theory, the systemic theory of organi-

zation functioning, and cognitive learning. The methods applied have been survey-feedback and process consultation. This model has been applied also to health care organizations (7, 16). The intervention included the development of team work and leadership at the ward level in hospitals. The evaluations were based on process description, questionnaire studies, and interviews before and after the interventions.

Action-oriented studies to develop the work at municipal health care centers have been based on the cognitive organization development approach and activity theory. These have been characterized by the historical analysis of work and organization, the modeling and analysis of organizational functioning, and a study of the learning process longitudinally. The key concept has been learning by expanding (13).

To improve the contents and delivery of primary health care through an increase in patient orientation, a family physician program was started in Finland (17). The program has attempted to put into operation three functional characteristics, namely, population responsibility, team work, and the management of daily work. This is a demonstration program which has been evaluated from various perspectives. The results demonstrated improvements in the quality of health services and doctor-patient relationships and an increase in job satisfaction despite the increased amount of work.

Concluding remarks

The educational level and hierarchical status in an organization have been found to be related to perceived job stress and strain symptoms among health care personnel. In general, physicians have the best health status and practical nurses and nurse's aides the worst health status. This is nevertheless a very superficial picture because the stress and strain profiles differ from one occupation to another. In addition the proneness to express symptoms and job stressors is different in various occupational groups.

The structure and functioning of an organization are important sources of job stress and strain because of their bureaucratic and professional nature. Therefore, organizational development interventions promoting team work, rationalization of work routines, and patient orientation and involvement are needed. Interventions based on local theory and context are preferable because otherwise the strong structure of the central health care system easily leads to practical solutions that are too centralized.

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