

The importance of job satisfaction in hospital quality process

Marina Kaarna

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– Essay –

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Author Marina Kaarna				
Author's position and address Head of quality department, North – Estonia Regional Hospital Sütiste tee 19, 13419 Tallinn, Estonia				
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Abstract

Purpose. The purpose of the study was to evaluate the level of job satisfaction among the staff of Pärnu County Hospital and to describe variables related to their job satisfaction.

Methods. The study was carried out in December 1998. The opinions of staff regarding satisfaction with their jobs were studied using an Estonian translation of the Norwegian Medical Association Job Satisfaction questionnaire, which was distributed to all 673 staff members of the hospital. Three levels of analyses were carried out. Stepwise regression analysis was used to determine which single item factors were most important in job satisfaction for the various groups of hospital staff. Further, global job satisfaction item and a four items construct called nature of job satisfaction ($\alpha=60$) were selected as dependent variables. The independent variables consisted of constructs measuring: knowledge in planning (3 items $\alpha=70$), relationship with superior (5 items $\alpha=89$), strategic knowledge of workplace (5 items $\alpha=84$), work stress (6 items $\alpha=77$), unrealistic expectations (5 items $\alpha=72$), collegial relationships (2 items $\alpha=75$), discussions with colleagues (3 items $\alpha=80$), recognition (3 items $\alpha=67$) and sense of belonging (single item). Pearson correlations were used to determine whether the independent variables were significantly correlated with job satisfaction. Scheffe's F-test was used to conduct post-hoc analyses of variance for each independent variable between categories of hospital personnel.

Results. The response rate was 77%. The key results were that overall job satisfaction was moderately high (3.86 on a scale of 5); however there are differences in satisfaction models between categories of personnel. In addition, there are significant differences in the correlations between job satisfaction and the independent variables among the groups of personnel.

Conclusions. The findings of this study suggest that executives of a health care institution that are informed about the expectations and daily work-related problems of their employees are better able to understand the needs of their employees. Executives should: 1) build up effective relationships between managers and staff; 2) identify negative working conditions which affect staff; 3) appropriately delegate authority to personnel, and hold them accountable for the work done in their organizational units; 4) keep staff informed about changes that will affect them; and 5) express appreciation and recognition for the efforts of staff members in accomplishing the work of the health care organization. In doing this, executives will create a favorable working environment for the hospital staff. The value of the study is that the results can be used as a set of reference levels and indicators for the human resources development component of the quality management system of Pärnu County Hospital.

Key words: hospital staff, job satisfaction, variables related to job satisfaction, quality.

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INTRODUCTION

Health care in reforms in Estonia

Since 1991, the Estonian health care system has been undergoing: 1) consolidation of the hospital system; 2) reductions in the number of doctors and nurses; 3) decentralisation of management to counties and to individual health care institutions; and 4) privatisation of family practices, dental practices and drugstores; emergence of private suppliers of specialised healthcare services. This caused, inter alia, transfer of control over health care processes from direct governmental involvement to regulations by means of market forces. Transfer to market economy, including in health care, has been the goal of all subsequent Estonian governments since 1991. This process in healthcare has its controversies and takes time; so the health care market in Estonia is not mature even today. However, the process had great impact on attitudes of staff and interrelations of organizations already in 1998, when the current investigation was initiated.

The hospital system in 1991 had a capacity considered to be in excess of the needs of the population. The reason was that during the Soviet period, hospital capacities were kept at high levels for strategic military reasons. In 1991, there were 120 hospitals providing services for the Estonian population of 1.44 million, a ratio of 9.2 hospital beds per 1000 population. In comparison, there were 4.3 hospital beds per 1000 population in Denmark, 3.8 in Norway, 4.1 in Sweden and 4.3 in Finland (1). Beginning in 1991, the numbers of hospitals and hospital beds in Estonia were reduced considerably. By 1998 there were 78 hospitals in Estonia, a ratio of 6.0 hospital beds per 1000 population, compared to 3.3 hospital beds per 1000 population in Norway, 2.7 in Sweden and 2.4 in Finland (1).

During the last decade, the number of physicians has also decreased continually. In 1990, there were 3.5 physicians per 1000 population in Estonia. By 1998, the number of physicians per 1000 population was 3.0 in Estonia compared to 4.1 physicians per 1000 population in Norway, 3.1 in Sweden, and 3.0 in Finland. The number of nurses also declined in Estonia, from 8.5 per 1000 population in 1991 to 6.2 per 1000 population in 1998. The reduction in the numbers of nurses may reflect poor salaries and low professional status. For comparison: in 1998, there were 18.4 nurses per 1000 in Norway, 8.2 in Sweden and 21.6 in Finland (1). During the reorganization of health care in Estonia the number of nurses declined faster than the number of physicians. In 1998, the ratio of nurses to physicians was 2:1, which is much lower than in neighbouring Scandinavian countries.

Rationale for the survey of job satisfaction

In addition to the consolidation of the hospital system and reductions in health personnel, decentralization and delegation of management of health care system to the county and hospital levels also occurred in 1992 (1).

Within individual hospitals, the tasks of management have changed from the application of centralized procedures to the development of staff and patient care policies according to the needs of the particular hospital. In the effort to be more competitive and more responsive to patients, Quality Assurance programs, including patient satisfaction surveys were implemented in many hospitals in Estonia. However, despite importance of human factors in the quality of care and despite great changes in the work environment which could be expected to increase stress among hospital staff (2) there were no systematic efforts to measure staff satisfaction in Estonian hospitals.

Estonia is divided into 15 counties, one of which is Pärnu (4806 km²) with an estimated population of 95 000 and a 470-bed county hospital in its major city. From the viewpoint of providing healthcare services, Pärnu County Hospital was a typical county hospital, providing secondary care through an inpatient unit and a separate outpatient clinic. In 1998, the hospital had 470 beds providing a variety of specialized services such as internal medicine, cardiology, surgery/orthopedics, obstetrics/gynaecology, paediatrics, and neurology. In December 1998, the inpatient unit and the outpatient clinic were integrated. After integration, there were a total of 729 staff members, including 123 physicians, 300 nurses, 174 nursing assistants and 132 non-health related staff.

However, from the viewpoint of quality awareness, Pärnu County hospital was somewhat ahead of other typical county hospitals, in recognizing the need to combine quality policies with sound human resources development. Therefore Pärnu County Hospital was the first healthcare facility in Estonia, where analysis of staff satisfaction was initiated simultaneously with investigating patients' satisfaction, as part of the hospital quality assurance program.

PURPOSE OF THE STUDY

The purpose of the study was to evaluate the level of job satisfaction among the staff of a typical Estonian hospital and to describe variables related to the job satisfaction of staff.

For the hospital the purpose of the study was to establish a system of indicators and reference levels for measurement of job satisfaction as a component of human resources development.

THEORETICAL FRAMEWORK

The integration of job satisfaction in modern quality systems

Offering the highest quality of health care services possible to as many people who need them, within a given environment of social, material, financial and human resources is the main goal of health care systems and of every single health care organization or unit within an organization.

Achieving this goal requires a committed and high quality workforce in healthcare organizations and systems.

Therefore quality systems and quality awards, whether generic ones or designed specifically for healthcare systems, increasingly address continuous human resources development, availability of highly motivated and quality-oriented staff, as a pre-condition for the quality system of an organization to be certified, recognized or awarded. Examples of well-known quality systems are the ISO 9001 quality management requirements, European Business Excellence Model (European Quality Award, established in 1992), Malcolm Baldrige National Quality Award (established in 1987) in USA, Investors in People (established in 1991) in UK.

Due to the anticipated significant impact of human resources management on quality of services and its increasing coverage in formalised quality systems, it is essential, that a healthcare establishment pays attention to the quality of human resources in early stages of development of a quality system. Attending to job satisfaction of staff is then a fundamental component of human resources quality.

In particular many researchers have demonstrated strong positive correlations between job satisfaction of medical staff and patient satisfaction with the services in these health care settings (3-7).

Consequently, by creating an environment that promotes job satisfaction, a health care manager can develop employees who are motivated, productive and fulfilled. This in turn will contribute to higher quality patient care and patient satisfaction (6).

Definitions of quality in health care

There are many definitions of quality, generic ones and for health care quality in particular. These definitions range from defining quality as doing the right things in the right way to giving a patient what he needs and wants (8,9). In 1980, Donabedian defined high quality health care as that kind of care which is expected to maximize patient welfare, after one has taken account of the balance of the expected gains and losses that accompany the process of care in all its aspects. For purposes of evaluation of quality he defined three domains of measures: structural, process and outcome measures (10). Later he divided outcomes into two types: technical outcomes and interpersonal outcomes (11).

Technical outcomes include physical and functional aspects of care. As examples of favourable technical outcomes can serve the absence of post-surgical complications and the successful management of chronic conditions, e.g. hypertension.

Interpersonal outcomes express the "art" of medicine. These include patient satisfaction with care, the influence of care on the patient's quality of life as perceived by the patient, patient's improvement in coping with consequences of disease, changes in emotional health status, fear reduction etc.

Emphasizing the complexity and variability of health care quality issues, it has been suggested that several formulations are possible, depending upon which aspect of

patient care is examined, who is evaluating the quality, in what setting; and with which specific objectives (12,13). Different perspectives and definitions of quality will logically tend to lead to different sets of indicators of quality and different approaches to its measurement and management.

In modern commercial settings most prominent definition of quality is the generic definition, provided in international standard ISO 9000:2000: "Quality is a degree to which a set of inherent characteristics fulfils requirements" (14). Due to the general character, popularity and wide application of quality systems and principles, based on ISO 9000 this definition is widely used and/or has its influence on present-day perceptions of quality in particular fields, including health care. This is a generic definition, which does not specify either the nature of object of definition (which has to possess the specified "set of inherent characteristics") or the source of quality requirements, applied to this object.

However, if to trace the evolution of ISO 9000-series of standards, then besides the generalization of requirements in these standards, the increasing stress on customer focus and customer satisfaction can be noticed. Also, customer focus and customer satisfaction are the highest rated items amongst the categories/criteria of prestigious Malcolm Baldrige and European Quality Awards and various national quality awards, based on these schemes.

According to this concept, service must correspond to the preferences and values of the customers and the most important quality indicator is customer satisfaction. Due to active participation of health care institutions in the movement to be recognized by any of the above mentioned quality systems and involvement of market forces on health care industry, in several definitions of health care quality the views of patients are the central focus and place, and quality has been defined as the ability to meet the needs of customers (9) or as the properties or characteristics of a service or a system that determine its ability to meet demands (15).

Patient representatives, often using an ethical perspective, emphasize the rights and autonomy of patients and the importance of their participation in decisions on optimal care (16).

However, the views of patients on quality are not always consistent with views of physicians. For the patient, things that matter are ease of access, choice of doctors, sympathy and friendliness in the delivery of health care (15). It is believed that the patient has usually a limited knowledge of what constitutes technical quality (18).

For example, one cannot expect much satisfaction from a patient after amputation, despite that this kind of surgical intervention might be fully justified and needed for that patient from a professional viewpoint. Similarly, a patient can express extreme dissatisfaction with services after refusal from prescription of psychotropic drugs or in the case of use of restraints, despite that both acts are dictated by the needs of that patient, as perceived accordingly the best professional judgment of a medical worker.

Furthermore: when an insurance company, health management organization or the government is paying the health care bill, there is little incentive for a patient to express discretion and require efficiency in the delivery of medical services. The result is the failure of a distorted marketplace to deliver reasonably priced and timely health care, which can lead to discrepancies in providing necessary treatment to other patients, who need it foremost. Other distortions of health care services market can be illustrated e.g. by the need to hospitalise some patients, even if they do not wish so and by the fact, that vaccination is not only in the interests of a vaccinated patient but also of surroundings.

Therefore the health care system of high quality should be able to differentiate between what the patient wants and what are his/her medically justified needs, and how these wishes and needs fit into the overall picture of the system. Consequently patient satisfaction and judgment, despite being extremely important indicators (19) of quality, should not be overestimated. Note also, that it is the first dimension of healthcare quality accordingly to Øvretveit (19).

For health care professionals it is common to define quality in terms of results (or outcomes) of care that is provided. Related definitions usually emphasize the technical aspects of quality of care as: “make the right decisions”; “do the right thing right”; “to act in accordance with guidelines” (18).

Health care professionals usually emphasize (the lack of) clinical expertise and skills as crucial in (sub)optimal care and self-regulation as more effective than external control in improving care. Professional development, continuous education and systems for licensing and recertification should, accordingly to this viewpoint, guarantee quality of care (16).

The definitions of quality, based on technical aspects and skills have also been called as “absolutist” definitions, and the definitions based on patient's satisfaction, as “individualized” definitions, thus appointing that definitions, oriented on patient satisfaction, emphasize the need of service to be tailored to needs of an individual patient. The balance of absolutist versus individualized care in the daily management of patients can sometimes lead to complex ethical dilemmas (20).

The quality from the viewpoint of a patient and of a medical professional (or patient quality and professional quality dimensions)(19) are well expressed in the widely used definition of health care quality of Institute of Medicine (USA): “The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge”(21).

Desirable personal health outcomes include improvement (and prevention of deterioration) of health status and health-related quality of life, and management of physical and psychological symptoms. Desirable outcomes also include attention to interpersonal aspects of care, such as patients’ concerns and expectations, their sense of dignity, their participation in decision making, and in some cases reduced burden on family and caregivers and spiritual well-being.

Such outcomes can be described at both the individual level (e.g., improvement in individual health status) and the population level (e.g., reduced aggregate burden of illness and injury in a population (22).

US federal Agency for Healthcare Research and Quality (AHRQ) defines the quality of health care as “doing the right thing, at the right time, in the right way, for the right person—and having the best possible results” (23).

It should also be noted, that high-quality care does not necessarily lead to desirable outcomes. There are many factors beyond the control of providers, such as environmental or social factors, that can affect outcomes. The corollary is also true; desirable outcomes may occur despite poor quality of care (24).

Besides patients and practicing medical professionals there are other stakeholder groups which have different or complementary views, what the high quality health care is or should consist.

As an example: clinical researchers see the lack of convincing scientific information on efficacy and efficiency of specific clinical actions and decisions as the problem in achieving optimal care. They propose systematic reviews to summarize the evidence and the development and dissemination of evidence-based guidelines (16).

However, there is a significant number of (so called) alternative and complementary treatment modalities,

- which are accepted by the general public and a number of healthcare providers and
- for which high volumes of empirical evidence of effectiveness is collected, but which systematically lack to demonstrate statistically significant scientific evidence in controlled trials.

As examples one can recall here a number of acupuncture modalities, low level laser therapy, many healthcare applications of continuous or pulsed electromagnetic fields, manual therapy, various water therapies etc. Therefore it can be expected, that there exist therapies and/or medical manipulations, which fail to demonstrate effectiveness, if investigated in controlled trials by calm scientists, but are effective, if enhanced by therapeutic relationship between patient and empathetic and devoted medical workers.

Anyway, patient satisfaction as the major single component of healthcare quality is achieved in vast majority of cases of application of such therapies, as otherwise these modalities would not survive. It serves as another proof of critical importance of human factor and human resource management as inputs to the quality of healthcare outcomes, independently whether related healthcare procedures are evidence-based or not.

From the perspective of healthcare managers on improving care the emphasis is less on good or bad performance of professionals, but on the organizational context and the systems of care provision. Influenced by experiences in industry, improvement of care processes are foreseen to be undertaken by teams, who analyse the processes and try to

redesign them. A customer focus, attention to the organizational culture and teamwork in the institution are also part of this approach (16).

To define what the quality of health care really is, appears to be even more complex due to the fact that, besides the above-mentioned stakeholders, also, society at large, purchasers and financial administrators, will have their own set of priorities. From their point of view, quality health care is the care that meets care needs at the lowest costs (25).

Policy makers and payers usually have more belief in laws, regulations, rationing, contracts and budgets to influence health care and clinical performance. Assumption is that care providers and institutions are particularly sensitive to potential consequences of not meeting specific requirements. They also demand public accountability of the care provided: systems for monitoring the care, using quality indicators, and feeding back data on variation between care providers, practices and hospitals (16).

A definition of quality which many professional services have found to work best is the three-dimensional definition of patient, professional and management quality (26):

1. Patient quality is what patients say they want.
2. Professional quality is what professionals think patients need (outcome and process).
3. Management quality is using the fewest resources to give patients what they want and need, without waste, errors or delay, and within policy and legal regulations (19).

The integrated definition combines three elements. A quality professional service/system gives to patients what they want and need at the lowest cost. Integrated quality development increases the capability of a service to achieve high quality in all three dimensions at the same time. If quality activities are performed in the right way, then there is no trade-off between increasing patient satisfaction, improving professional outcomes, and reducing costs (26).

Interrelation of job satisfaction and motivation theories

Both job satisfaction and motivation are the objects of investigation of diverse field of organizational and psychological sciences, which incorporate aspects of clinical psychology, social psychology, psychometrics and also broader social and organizational studies.

Researchers have been dealing with human motivation at workplace from two viewpoints, which also differ on the adherence to job satisfaction.

The first is a “top down” approach, which is rather the topic of organizational studies and origins from a managerial viewpoint. It expects to find answers to the question: "How should I motivate my workers to perform well?" This approach deals mainly with externally controlled (or directed) motivation. It is related to categories and methods of job design and deals more with external (or environmental or impersonal)

characteristics of motivation - up to the viewpoint, that a worker by its nature is lazy and negligent, and therefore should be motivated mainly by means of rewards, bonuses and punishments. The staff member is an object, who should be motivated by different means to perform well.

In this relation McGregor (27) identified two fundamentally different sets of assumptions, held by managers. The conventional view was labelled by McGregor as Theory X and the modern one as Theory Y. Theory X presumes that an average employee inherently dislikes work and related physical and mental efforts and, whenever possible shall make attempts to avoid it. Therefore employees must be directed, coerced, controlled and/or threatened with punishment to achieve goals of the organization. Employees attempt to get out of responsibility and seek external direction whenever possible. Most workers consider security of job more important than other work related factors and will express little ambition. Method of motivation, based on Theory X can be called as 'carrot-and-stick'-method.

In contrast, Theory Y keeps the viewpoint, that goals of an individual and of the organization can be integrated. Managers, supporting Theory Y believe that subordinates work hard, are cooperative, and have positive attitudes. The expenditures of physical and mental effort in work are as natural as play or rest. The manager should complement the employees' effort and creativity through gaining their commitment to the organization's goals, which entails allowing self-direction and discretion, reinforced through a system of feedback and rewards.

The "top down" approach traditionally deals more with various job design methods as job specialisation and simplification, rotation, enlargement, enrichment (28). Job satisfaction is involved indirectly, as much as implementation of job design methods influences the satisfaction with the job.

The other approach is the more personalized "bottom up" approach, which studies properties of staff members, their behaviour at workplace, motivators, dissatisfiers and other properties of job environment. It is a topic of psychology (up to the studies of animal models) and/or organizational (or occupational) psychology and deals mainly with autonomous motivation, having the goal to get answers to questions: "How an employee feels her/himself at the workplace? What would motivate her/him to perform well? What causes her/him to behave at the workplace (and outside it) as he does? " The staff member is a subject who has (or has no) motivation to perform as he/she does because of a combination of internal and external factors, which should be investigated, measured and improved as much as possible and practical¹.

¹ Note also a linguistic problem here. Meanwhile in English the infinitive and noun is signed by the same word '*motivation*', then in some other languages these terms differ. E.g. in Estonian, while the 'top-down'-approach should be signed mainly by infinitive '*motiveerimine*', then 'bottom-up'- approach by the nouns '*motivatsioon* või *motiveeritus*', which all are translated to English as a single word '*motivation*'.

Meanwhile the job satisfaction or different facets of it appear as indirect constituents of motivation in the first approach; these are closely linked and intertwined with the second approach to (or meaning of the) motivation. In this relation motivational theories apply in most of their part to job satisfaction and *vice versa*.

As an illustrations of this close relationship can serve Maslow's theory of motivation through satisfaction of needs (29), Herzberg's motivation-hygiene theory (30) with its sets of motivators (satisfiers) and hygiene factors (dissatisfiers) and Latham/Locke's goal-setting theory with established connection between motivation, self-regulation and job satisfaction (31).

Job satisfaction and motivation, however, are separate topics. Satisfaction can be seen as a result of acting in accordance with motivation. Then the degree of job satisfaction is a measure of level of satisfaction of needs and motives on workplace as independent variables.

It is also suggested, that motivation, including motivation at workplace, reflects people's search for positive meaning and job satisfaction reflects the degree to which this meaning is found (32) and that motivation is a component, which links job characteristics to job satisfaction (33).

Job satisfaction: definitions, facets and importance

Schermerhorn et al define job satisfaction as the degree to which individuals feel positive or negative about their jobs (34). It is an attitude or emotional response to one's tasks as well as to the physical and social conditions of the workplace. Job satisfaction is motivational and leads to positive employment relationships and high levels of individual job performance.

According to Locke and Henne (35) the definition could be "the pleasant emotional state which flows from someone realizing his/her motives (values) in the work".

"Job satisfaction is simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their job. As it is generally assessed, job satisfaction is an attitudinal variable"(36).

Greenberg and Baron defined work satisfaction as employees' cognitive, affective and evaluative reactions directed toward their work (37). Work satisfaction is an affective orientation towards anticipated outcome (38). Job satisfaction has been defined as an affective state describing feelings about one's work. According to Abu-Bader (39) satisfaction and dissatisfaction are a function of the relationship between what individuals expect from their work and what they actually derive. Defined in that way job satisfaction enters into interaction with goal setting theories of motivation.

Job satisfaction can be considered as a global feeling about the job or as a related constellation of attitudes about various aspects or facets of the job. The *global approach* and the *facet approach* can be used to get a complete picture of employees' job

satisfaction (36). Facets are specific elements of a job, such as the challenge a job provides, the physical environment in which work is constructed, and the salary received. People may have different evaluative responses toward each facet of the job.

According to Werner (33) job satisfaction has five facets, which can be put together to measure a Job Descriptive Index (JDI) as follows:

- The work itself – responsibility, interest and growth.
- Quality of supervision – technical help and social support.
- Relationships with co-workers – social harmony and respect.
- Promotion opportunities – chances for further advancement.
- Pay – adequacy of pay and perceived equity vis-à-vis others.

Research tends to divide the characteristics of work into two broad categories: extrinsic variables and intrinsic variables. In 1959 Herzberg et al. made the distinction between the intrinsic rewards from the job and the extrinsic rewards from the job. *The intrinsic factors* refer to a job's inherent features, people's affective reactions to features integral to the work itself. *The extrinsic work factors* focus on issues that are external to the job itself, such as pay (41). The distinction between intrinsic and extrinsic work factors, rewards, motives, needs etc. remains to be a useful tool in studies of many researchers.

According to Schermerhorn (34) the importance of job satisfaction can be viewed in the context of two decisions people make about their work. The first is the decision to belong – that is, join and remain a member of an organization. The second is the decision to perform – that is, to work hard in pursuit of high levels of task performance. Job satisfaction influences absenteeism or the failure of people to attend work. Job satisfaction can also affect turnover or decisions by people to terminate their employment (34).

There are important reasons why the researcher should be concerned with job satisfaction. The first is that people deserve to be treated fairly and with respect. Job satisfaction is to some extent a reflection of good treatment. It can also be considered as an indicator of emotional well-being or physiological health. The second reason is that job satisfaction can lead to behaviour of employees that affects organisational functioning. Furthermore, job satisfaction can be a reflection of organisational functioning. Differences among organisational units in job satisfaction can be diagnostic of potential trouble spots (36).

Dissatisfied workers are more likely to provide inferior services, the physical and mental status, and the social functioning of these workers can be affected substantially by the level of their job satisfaction (42).

However, as Schermerhorn points out, job satisfaction alone is not a consistent predictor of individual work performance (34).

Importance of studying job satisfaction in a health care institution

Hospital personnel have difficulties in meeting the needs of their patients if their own needs are not met (19,43); therefore hospital managers have responsibilities to both staff and patients (44).

According to the literature, job satisfaction in health care organizations is related to many factors: optimal work arrangements; the possibility to participate actively in the decision-making process; effective communication among staff and supervisors and to be able to express freely one's opinion. Collective problem solving and the attitude of management are also important to the satisfaction of the employees (45,46,47).

Job satisfaction can be increased by attending to motivating factors, such as making work more interesting, requiring more initiative, creativity and planning (48,49). This is especially relevant when budget constraints limit increases to pay and benefits (50).

Managers who grasp the importance of factors affecting the well-being of staff are more likely to gain improved performance from the various groups of hospital staff (49-51). It is of utmost importance to seek the opinions of employees and include them in decision-making and problem-solving processes (46). This will improve satisfaction among the employees and make them feel that they are part of the organization (44,46).

Review of studies on job satisfaction

Relationship between people and work, including work satisfaction, has been intensively researched since the beginning of the previous century. Job satisfaction is found to be significantly linked to absenteeism (53) and turnover (54).

There is evidence that job satisfaction positively influences organizational citizenship behaviour (55). The link between job satisfaction and direct performance is found to be unequivocal (56,57), despite the fact that the direction of causal relationship between individual performance and job satisfaction is disputable; it means: whether happy workers are productive workers or *vice versa*.

Taking into account, that:

- customer satisfaction is a top priority outcome of ISO 9001 based quality systems and
- patient satisfaction forms one of the main outcomes for quality for patient in healthcare and

- job satisfaction in healthcare settings has been found to have strong direct correlation with patient satisfaction (see above),

then job satisfaction is an important organizational variable in all settings and especially in healthcare settings. Hence it has become an integral part of the theories of motivation and dedication to work and serves as an important object of studies for various organizations and professions.

In the healthcare field a number of comprehensive longitudinal studies have been performed, which are dedicated to the investigation of job satisfaction of nurses and physicians, including nurses in nursing homes and general practitioners

In the Richardson and Burke study of over 2000 physicians in Canada, job satisfaction correlated with self-rated quality of care and self-assessed patient relations (58). In the study, physician overall job satisfaction was 3,45 (SD 1.06) on a Likert scale 1-5. Job satisfaction also associated negatively with subjective stress ($r -0.28$), but very little of variance was accounted for by differences in work.

Dearly et al. (59) studied a sample of 333 consultant doctors in Scotland, and concluded that coping and stress appraisal act as mediators between personality and emotional distress.

Burnout is one of the potential hazards occurring among individuals who do “people work”. People approaching burnout begin to feel dissatisfied with their work accomplishments. Another trait of burnout is that a person becomes dehumanised and views his/her clients as somehow deserving their troubles, or has other negative feelings toward them (59).

Evidently a person's job satisfaction is dependent of multiple factors, including but not limited to characteristics of personality, type and reputation of work, possibility to use ones skills, locus of control (i.e. where a person is located on the scale of perception of control over influential forces acting on his/her fate – whether these controls are more internal or external)(60).

It is suggested, that job satisfaction can partly have genetic basis. Arvey et al (61) demonstrated on the sample of 34 pairs of monozygotic twins grown apart that twins are more alike in job attitudes than non-twins. They propose, that around 30% of variance in job satisfaction can be related to genetic factors.

Despite some stand-alone or ‘pure’ job satisfaction theories/models exist or have independently developed, majority of job satisfaction theories/models are dealing with satisfaction of externally or internally generated needs, motives or drives of a worker. This, as stated above, convolutes these theories/models with the framework of motivational theories. Motivational theories, especially ones, which implement “bottom-up” approach, belong mainly to the group of sciences of (social or organisational) psychology. Traditionally motivational theories are divided into two categories: content theories and process theories (62,63).

Content theories consider behaviour in the context of psychological and social needs of an individual and assume, that all individuals possess similar set of needs. These theories primarily try to identify and describe the combinations of internal and external activators, needs or urges that influence job satisfaction. It is assumed, that fulfilment of needs and attainment of values can lead to job satisfaction (64).

Process theories seek to explain how and why human behaviour is energized, directed towards certain choices/behavioural forms and sustained. These theories place emphasis on describing the functioning of the person's decision system, relating to behaviour and process by which variables (expectations, goals, situations, values) involve to the perceived characteristics of the job to produce job satisfaction.

If content theories tend to assume, that people have similar needs and recommend the characteristics that ought to be present in all jobs then process theories stress the differences in people's needs and focus on the cognitive processes that create these differences, including that motivation can vary from situation to situation.

An archetypical example of content theory was developed by Abraham Maslow in his classic article "A Theory of Human Motivation"(29). He presented a hierarchical model of five levels of needs in ascending order: physiological needs, safety, belongingness/love, esteem and self-actualisation. The person seeks essential satisfaction of the most prominent need on the lowest unsatisfied level. Higher unsatisfied needs usually appear after satisfaction of needs on lower levels. Satisfied needs are no longer motivators, unless re-opened due to some deprivation.

This theory enjoys wide acceptance because of its conceptual clarity and remains in management and behaviour research, even though there has been little empirical evidence to support this model (65). It has been criticized from several theoretical viewpoints. Some critics appoint that needs of individual are dynamic rather than static and more than one level of need may be operating at any given time. As needs reflect psychological and physiological deficiencies, these must be continually and repeatedly satisfied. It is not realistic to expect these to be constantly satisfied in some hierarchical order.

Other authors of content theories have decreased the number of levels and have turned the levels more horizontal.

Alderfer suggests, that individual needs can be grouped into three:

- existence needs, which include food, pay and conditions at work
- relatedness needs, which are met through relationships, including colleagues at work
- growth needs, which express the desire for psychological development (66).

Alderfer suggests that it is better to think rather in terms of continuum than in terms of hierarchy. While Maslow's theory suggests that satisfied needs become less important, Alderfer states, that relatedness and growth needs can become more important when satisfied.

Herzberg developed a well known two-factor motivation – hygiene theory, which is based on distinction between extrinsic factors and intrinsic factors (30). According to this theory, job satisfaction and job dissatisfaction are not two ends of a continuum but two separate concepts (48).

Hygiene factors (working conditions, salary, job security, company policy, supervisors and interpersonal relations) are extrinsic ones; they can reduce dissatisfaction but do not

cause job satisfaction. These dissatisfaction avoidance factors form the background or environment of work setting and affect less immediately the daily job, thus forming a set of necessary, but not sufficient pre-conditions for job satisfaction. Herzberg labeled extrinsic factors as hygiene factors because they are used for preventing job dissatisfaction, an analogy to the concept of preventive medicine (48,67).

The second set of factors, intrinsic ones, were termed as motivators. These represent sources of job satisfaction and include achievement, recognition, personal growth, personal development, autonomy and other intrinsic aspects of work (48, 67).

Thus, the motivation-hygiene theory suggests that the opposite of “job satisfaction” is “no job satisfaction”, not “job dissatisfaction” and these factors require two different scales for measurement.

Whereas Herzberg focused on general factors of job, Hackman and Oldham based their theory on ideas of Herzberg, however concentrated on specific factors that are an integral parts of the job itself, developing their motivation theory in direction of job enrichment (68). They claim that an enriched job is that one, which is relatively demanding in skill variety, task identity (being a possibly complete segment of a work), task significance, autonomy, and feedback from the job. They insist that when jobs comply with these criteria, then most people will experience a sense of meaningfulness, responsibility for outcomes, and interest in results of their work activities. The result is claimed to be higher job satisfaction, lower absenteeism, lower turnover, and higher internal motivation (49,68).

Amongst process theories the goal-setting theory argues that employees set goals and that organizations can influence work behaviour by influencing these goals (69). Perceived goals direct the efforts and affect the job motivation of employees in the following ways: difficult goals lead to higher performance than easily attained goals; specific goals lead to higher performance than general ones: in the case of difficult specific goals the feedback on performance is necessary to show achieved benefits.

Latham and Locke demonstrated that most crucial characteristics of goals are clarity and degree of difficulty (70). Besides these characteristics it is desired to achieve an acceptance and an experience of importance of employees in attaining these goals. Thus participation in goal-setting increases the person's sense of his/her control latitude and fairness of the process.

Equity theory, developed by Adams views the motivation from the perspective of social comparisons what employees perform with co-workers or against some standards of comparison. It predicts that people will choose the alternative what they perceive as fair (71). The components of equity theory are inputs, outcomes, comparisons, and results. Inputs are the stakes, what the individual inserts into the situation and into the activities required. Outcomes are what the individual receives from the situation. The comparisons are between the ratio of outcomes to inputs and some standard. Results are the behaviours and attitudes that follow from the comparison. The idea is that people look at their inputs and the payoff they receive and compare the latter with what they

think their comparison standard is getting. If a state of equity is perceived, then workers are satisfied with the situation.

Another version of equity theory was developed by Elliot Jaques (72,73) Jaques' theory of equitable payment holds that individuals have an intuitive knowledge of their capacity, the level of their work, and the fairness of their pay. When their capacity is properly utilized in their work and when their pay matches their level of work, they achieve psychological equilibrium.

Job demand and decision latitude model was first developed and presented by Robert Karasek (74), who combined epidemiological data on the relationship between work demands and health complaints with studies on job satisfaction and motivation. The model was further refined by Karasek and Theorell as the Demand/Control Model. Central in this model is the interaction between job demands and job control (or decision latitude of worker). The model assumes two main hypotheses: 1) the combination of high job demands along with low job control precipitates psychological and physical strain ("high strain" jobs); 2) jobs in which both demands and control are high lead to well-being, learning and personal growth ("active" jobs) (75).

Karasek and Theorell used data on job characteristics from the national Quality of Employment Surveys performed in the U.S.A. and Sweden to verify their model. They identified occupations with desirable and undesirable job characteristics associated with different levels of health risks.

Authors discriminate between physical demands and psychological demands of work. Physical demands may involve working in awkward positions, muscle loads, noise, heat, exposure to toxic substances, risk of burn or shock or general dangerous work methods. Physical demands are important, however shift in focus towards psychological demands can be noted. The psychological burdens of the work can come from different sources, such as deadlines, physical exertion, work conflicts or the mental stimulation necessary to accomplish a task. Even though there are several types of demands, "work load" is the most common demand for the majority of workers (75).

Researchers define control as "the worker's potential control over his tasks and his conduct during the working day". So if the worker's skill is being utilised and developed, the worker is more likely to feel in control of the many different situations that may arise (75). It is possible to distinguish between the objective presence of control and the individual's perception of control (perceived control).

Decision latitude is interpreted as the employees' "ability to control his or her own activities and skill usage"(75). Decision latitude in the Demand/Control Model consists of two sub-dimensions; a combination of decision authority and skills discretion. Skills discretion is the level of task variety that the employee experiences at work. Aspects such as learning opportunities, opportunity to use own skills and task variety are examples of skill discretion. Decision authority is freedom to plan and organize own work, freedom to take breaks when needed and freedom to decide what to do and how to do the work.

Johnson expanded the job demand-control model by adding the dimension of social support at the workplace (76), thus resulting in demand-control-support model. This model assumes that job strain is a result of the interaction of three job dimensions: demands, control and also social support, the latter being defined as ‘overall levels of helpful social interaction available on the job from both co-workers and supervisors’ (75). According to demand-control-support model the highest strain arises in a work environment when demands are high, control - low and social support - low.

All these theories carry useful concepts for understanding motivation and job satisfaction and in that way complement each other. Theories, based on investigation of needs show that different people want different things from the employment. Clear, specific, agreed-upon goals are important motivators. Equity theory shows that pay and pay programs must be perceived to be fair if they are to work as intended. Expectancy theory shows the importance of the contingency between performance and reward. As there is some validity in each of the approaches, it suggests that combining them should increase performance, which is a function of ability of a worker and his/her motivation.

Organizations may choose those approaches that fit their employee groups and their situation (77). In this relation social workers, including healthcare workers form a special group of employees with characteristics, which differ them from e.g. workers in industrial or commercial settings.

Managers of health services organizations must elicit co-operation and performance from their employees in order to ensure quality of care to the patients. Eliciting such commitment from staff is not easy to obtain under uncertain working conditions, e.g. in scenarios of reforms in whole healthcare systems or in the redesign of a given institution.

RESEARCH QUESTIONS

- How satisfied is medical staff (physicians, nurses, nursing assistants, therapeutic and diagnostics staff, administrative and support staff) with their jobs?
- What variables are associated with a certain level of job satisfaction?
- Is there a difference in the level of job satisfaction between the professional groups?
- Do the variables of job satisfaction vary by different professional groups?

METHODS

Study design

A survey was conducted in Pärnu County Hospital where the opinions of staff regarding satisfaction with their jobs were studied using a questionnaire. A quantitative analytical

design (78) for this study was preferred because questionnaires provide anonymity, is fairly economical, and a large number of staff members can be involved.

Sample

All staff members of the Pärnu County Hospital (n = 673) except 56 staff members who were away from work during the study.

Questionnaire

The questionnaire used was an Estonian version of the Norwegian Medical Association's job satisfaction questionnaire which was specifically designed for health care organizations (79). The questionnaire consisted of four sections. The first section included demographic data (sex, age, profession). The second section included assessment of the work arrangements in the unit and the attitude of the management staff. The third section dealt with relations between colleagues, immediate superiors and patients. The fourth section covered issues related to the working environment, workload and availability of information about the goals of the hospital. Job satisfaction was measured using the responses to a single item on the questionnaire using a 5-point scale (1-very dissatisfied to 5-very satisfied).

Data analysis

As the first phase of data analysis a stepwise linear regression was used to test the model of satisfaction with work. In this regression analysis separate questions were used as variables of the function. All the variables were previously standardised, which ensures the comparability of the relative importance of the factors within the model.

The use of a single item measure of job satisfaction was reviewed by Scarpello and Campbell (80) and Wanous et al. (81). These researchers found that the correlations between the single-item and the summed score of multiple items were 0.65 and 0.67, respectively. Both groups concluded that when respondents have little time, and when space on the questionnaire is limited, the use of a single item is justified. Nevertheless, in current work the questionnaire also contained a set of four additional items related to global job satisfaction, each one measured on a 5-point scale:

1. *I am proud that I am working at Pärnu Hospital.*
2. *I am willing to put in an extra effort to help the hospital.*
3. *I don't feel part of this hospital, nothing here depends on me.*
4. *My future and that of the hospital are not compatible.*

These items were used in this study by summing them to create a variable called the 'nature of satisfaction'. The Cronbach's reliability score for this scale was $\alpha = 0.60$, and the Pearson correlation between global job satisfaction and 'nature of satisfaction' was found to be 0.63. Job satisfaction is the main dependent variable and 'nature of satisfaction' is used as a corroborating dependent variable.

Nine independent variables were defined for the study, of which eight combined two or more items from the questionnaire and one represented a single item. All items were scored on 3-, 4- or 5-point scales as follows:

- 1) 'Planning' consisted of three items ('The hospital leaders are well informed about our work'; 'The hospital leaders have clear goals'; and 'My department head has clear objectives'), which were summed with a Cronbach's reliability score of $\alpha = 0.70$.
- 2) 'Relationship with superior' consisted of five items ('I have the opportunity to talk with my immediate superior'; 'I can trust my immediate superior with personal as well as work related concerns'; 'My immediate superior is well informed about my work'; 'My immediate superior is supportive and builds up my confidence'; and 'My immediate superior tells me when I am doing a good job'), which were summed with a Cronbach's reliability score of $\alpha = 0.89$.
- 3) 'Strategic knowledge about workplace' (further in the text: 'knowledge') consisted of five items ('I have knowledge about hospital goals'; 'I have knowledge about future plans'; 'I have knowledge about budget situation'; 'I have knowledge about results achieved and progress toward goals'; and 'I have knowledge about staffing problems among workers in my department'), which were summed with a Cronbach reliability score of $\alpha = 0.84$.
- 4) 'Work stress' consisted of six items ('How often do you have so much work that you feel restless and nervous?'; 'How physically tiring is your work?'; 'How mentally tiring is your work?'; 'How often does thinking about problems at work disturb your sleep?'; 'How often are you so tired after work that you have difficulty dealing with responsibilities at home, visiting friends, or pursuing a hobby?'; and 'How often have you been depressed or disturbed by conflicts arising at work?'), which were summed with a Cronbach's reliability score of $\alpha = 0.77$.
- 5) 'Unrealistic expectations of others towards responder' (further in the text: 'unrealistic expectations') consisted of five items ('How often did superiors / colleagues/ colleagues at other institutions / patients and their families / bureaucrats at the ministry present unrealistic expectations'), which were summed with a Cronbach's reliability score of $\alpha = 0.72$.
- 6) 'Collegial relationships' consisted of two items ('Colleagues support me when needed'; and 'My colleagues trust me'), which were summed with a Cronbach's reliability score of $\alpha = 0.75$.
- 7) 'Discussions with colleagues' consisted of three items ('How often do you discuss diagnosis / treatments with your colleagues?'; 'How often do you discuss patient care plans with your colleagues?'; and 'How often do you discuss patients' or their families' problems with your colleagues?'), which were summed with a Cronbach's reliability score of $\alpha = 0.80$.
- 8) 'Recognition' consisted of three items ('How often do colleagues / superiors / patients express praise for your efforts?'), which were summed with a Cronbach's reliability score of $\alpha = 0.67$.
- 9) 'Sense of belonging to organization' consisted of a single item ('The hospital is a complex organization. How much do you feel that you are an integral part of the hospital?'), measured on a 5-point Likert scale.

All these variables can be treated as continuous measures, since their scales set 'equal appearing interval' choices for each item on the survey instrument (82). In essence, the analysis is a series of Bivariate tests between continuous variables, for which Pearson's correlation is appropriate (83). Scheffe's F-test was used to conduct a post hoc analysis of variances between categories of workers. For statistical analyses, SPSS programs were used.

ETHICAL CONSIDERATIONS

The persons who were responsible for distributing the questionnaire in each unit within the hospital did not use any form of coercion to the respondents. Their task was simply to make sure that people received them. Responding to the questionnaire was completely voluntary in that respondents could decide to fill in the questionnaire, if they selected so, could leave any items blank that they wished, and then decided whether they wished to deposit their questionnaire, in whatever state of completion, in the drop box. These steps were implemented to ensure compliance with the principles of ethical conduct of the research, maintaining the dignity and privacy of participants, non-instrumentalisation, privacy, and non-discrimination (84).

These measures included, inter alia:

- the hospital management and staff was committed to the survey and expressed wide interest in the results of the survey, active feedback was obtained from staff during and between the follow-up meetings;
- the survey was preceded by meetings with staff, where assurance of voluntary response and anonymity were discussed and explained, including the right to reject the questionnaire as a whole and also any specific question in it;
- the questionnaires were anonymous, without any revealing of personal identities;
- the survey data is maintained and processed in suitably aggregated form, which disables identification of individual answers;
- the hospital obtained reference data and set of indicators for measuring of job satisfaction as a parameter of human resources development.

The Research Ethics Committee of the hospital was informed about this study; however a formal review by the Research Ethics Committee was not necessary because only hospital staff, not patients, were involved, completing the questionnaire was considered to be informed consent, was completely voluntary and all identities of participants was kept confidential.

RESULTS

By the end of the data collection period, 473 out of 617 staff members at Pärnu Hospital had completed the questionnaires, yielding a response rate of 77%. This response rate is similar or better than average of comparable studies (85,86). The average age of the respondents was 44.3 ± 13 years (the youngest being 19 years and the oldest 78 years).

The survey did not identify statistically significant differences either in global or in itemized job satisfaction variables between age groups.

Most of the respondents were women (95.9%). Of the respondents: 96 were physicians (male 15,3%, female 84,7%); 166 were nurses (female 100%); 95 were nursing assistants (male 1,1%, female 98,9%); 50 were therapeutic or diagnostic staff (female 100%); and 66 were administrative and support staff (male 7,6%, female 92,4%).

Note, that some gender related bias of the results of the survey can not be fully excluded, as the small number of male respondents belonged to two of five surveyed groups, other three groups were (almost) 100 % female.

Further, from the overall staff a distinct group ‘executives’ was separated, which consisted of top managers and leaders of structural units. This 33-member group consisted of staff members with an executive position, namely: one chief doctor, one deputy chief doctor, one senior nursing officer, eight department heads, 16 department senior nursing officers, one financial director, one catering manager, one chief accountant, one personnel manager, one chief engineer, and one chief laboratory technician.

Job satisfaction: overall and by occupational categories

The average rating of job satisfaction was 3.86 out of the possible 5 points with significant differences between categories of the staff (**Table 1**).

Table 1. Job satisfaction by occupational category measured on a 5-point scale.

Staff category	n	Satisfaction (± SD)	F-test ¹	P-value
Physicians ²	86	3.87 ± 0.75	4.5	0.001
Nurses	166	3.98 ± 0.75		
Nursing assistants	95	3.72 ± 0.95		
Therapeutic & diagnostics staff	50	4.06 ± 0.56		
Administrative and support staff	66	3.55 ± 0.91		
Total responders ²	463	3.86 ± 0.81		
Executives	33	4.15 ± 0.57		
Others	430	3.81 ± 0.83		
¹ The Scheffe <i>F</i> -ratio computed is the between-groups variance for all five categories of staff, divided by the within groups variance for all five categories of staff.				
² Total respondents = 473. Ten physicians did not respond to the job satisfaction question.				

Furthermore, a significant difference in job satisfaction ratings was revealed between executives (4.15 ± 0.57) and the staff (3.81 ± 0.83).

Models of job satisfaction by occupational categories

Stepwise regression analysis is the appropriate technique to determine which factors were most important in job satisfaction for the various groups of hospital staff. Separate analyses were run for nurses, nursing assistants, physicians, therapy & diagnostic staff, administrative and support staff and executives. The analyses indicate that items determining job satisfaction and their relative importance differ between occupational categories. The models describing job satisfaction by occupational category are presented in **Tables 2A to 2F**.

Table 2. Models of job satisfaction by occupational category (confidence level $\alpha=0.10$).

2.A. Most important items for nurses.				
Important items	Std Coeffs Beta	Cum R ²	R ² Chg	P-value
How often do you have so much work that you feel restless and nervous?	-0.422	0.234	0.234	0.000
How much do you feel that you are an integral part of the hospital?	0.253	0.321	0.086	0.001
My immediate superior is well informed about my work	0.178	0.349	0.028	0.024
<i>Dependent Variable: JobSat</i>				

For nurses the main items are: 1) work stress to the point where they feel restless and nervous; 2) feeling that they are a valued part of the hospital rather being taken for granted; and 3) that their immediate superior is well informed about the work that nurses are expected to do. The first item explained 23.4% of the variance in job satisfaction, the second explained an additional 8.6% and the third item explained 2.8%. The three items collectively explained 34.9% of the variance in job satisfaction.

2.B. Most important items for nursing assistants.				
Important items	Std Coeffs Beta	Cum R ²	R ² Chg	P-value
How often are you so tired after work that you have difficulty dealing with responsibilities at home, visiting friends, or pursuing a hobby?	-0.284	0.222	0.222	0.036
During the last year, have you been the victim of unpleasant harassment by colleagues?	-0.238	0.285	0.063	0.033
My immediate superior is well informed about my work	0.320	0.344	0.059	0.015
How much do you feel that you are an integral part of the hospital?	0.225	0.391	0.047	0.048
<i>Dependent Variable: JobSat</i>				

For nursing assistants the main items are: 1) work stress to the point where they feel so tired that they cannot enjoy hobbies or recreation after work; 2) unpleasant relationships with fellow workers; 3) that their immediate superior is well informed about the work that nursing assistants are expected to do; and 4) feeling that they are valued as an integral part of the hospital and not taken for granted. The first item explained 22.2% of the variance in job satisfaction, the second explained an additional 6.3%, the third item explained another 5.9% of the variance in job satisfaction, and the fourth item explained 4.7%. The four items collectively explained 39.1% of the variance in job satisfaction.

2.C. Most important items for physicians.				
Important items	Std Coeffs Beta	Cum R ²	R ² Chg	P-value
How much information do you have about economic situation, budget?	-0.284	0.102	0.102	0.010
My immediate superior is well informed about my work	0.234	0.156	0.054	0.033
<i>Dependent Variable: JobSat</i>				

For physicians two items were important enough to explain significant variances in job satisfaction. These were: 1) being informed about the economic and financial situation of the hospital and 2) that their immediate superior is well informed about the work that physicians are expected to do. The first item explained 10.2% of the variance in job satisfaction and the second explained an additional 5.4%. The two items collectively explained 15.6% of the variance in job satisfaction.

2.D. Most important items for therapeutic & diagnostic staff.				
Important items	Std Coeffs Beta	Cum R ²	R ² Chg	P-value
The hospital leaders have clear goals	0.425	0.243	0.243	0.003
Did you get unrealistic expectations from superiors?	-0.279	0.317	0.073	0.045
<i>Dependent Variable: JobSat</i>				

For therapeutic & diagnostic staff two items were important enough to explain significant variances in job satisfaction. These were: 1) that hospital leaders have clear goals as to what was to be achieved and 2) unrealistic expectations from their superiors. The first item explained 24.3% of the variance in job satisfaction and the second explained an additional 7.3%. The two items collectively explained 31.7% of the variance in job satisfaction.

2.E. Most important items for administrative and support staff.				
Important items	Std Coeffs Beta	Cum R ²	R ² Chg	P-value
My department head has clear objectives	0.331	0.163	0.163	0.006
How often do you have so much work that you feel restless and nervous?	-0.276	0.269	0.106	0.024
During the last year, have you been the victim of unpleasant harassment by colleagues?	-0.260	0.333	0.064	0.030
<i>Dependent Variable: JobSat</i>				

For administrative support staff the main items are: 1) that their department head had clear objectives for the department; 2) work stress to the point where they feel restless and nervous; and 3) being the victim of unpleasant harassment at work. The first item explained 16.3% of the variance in job satisfaction, the second explained an additional 10.6% and the third item explained 6.4%. The three items collectively explained 33.3% of the variance in job satisfaction.

2.F. Most important items for executives.				
Important items	Std Coeffs Beta	Cum R ²	R ² Chg	P-value
My immediate superior arranges for me to grow and develop new skills in my job	0.460	0.261	0.261	0.001
My department head has clear objectives	0.278	0.336	0.075	0.033
<i>Dependent Variable: JobSat</i>				

For hospital executives only two items were important enough to explain significant variances in job satisfaction. These were: 1) their immediate superior provides opportunities for growth and learning skills; and 2) that their department head had clear objectives for the department. The first item explained 26.1% of the variance in job satisfaction and the second explained an additional 7.5%. The two items collectively explained 33.6% of the variance in job satisfaction.

Correlations between variables: overall

For the hospital staff as a whole, higher rates of job satisfaction were positively correlated with variables: 'planning', 'relationship with supervisor', and 'sense of belonging to organization'. These positive correlations were confirmed using nature of satisfaction as a corroborating dependent variable. Equally important are the significant negative correlations found between job satisfaction and 'knowledge about workplace', 'work stress', and 'unrealistic expectations'. Again, these negative correlations were confirmed using nature of satisfaction (**Table 3**).

Table 3. Correlation of constructed independent variables with 'job satisfaction' and 'nature of satisfaction' variables for all staff.

Variable	Job satisfaction			Nature of satisfaction		
	Responses ¹ n	Pearson correlation	P-value	Responses ¹ n	Pearson correlation	P-value
Planning	346	0.318	0	342	0.378	0
Relationship with superior	411	0.257	0	344	0.241	0
Knowledge about workplace	430	-0.202	0	352	-0.387	0
Work stress	403	-0.316	0	338	-0.138	0.011
Unrealistic expectations	391	-0.128	0.011	327	-0.125	0.023
Sense of belonging to organization	430	0.375	0	422	0.552	0
Recognition	382	0.098	0.046	326	0.063	0.259
Collegial relationships	49	-0.034	0.816	42	0.278	0.074
Discussions with colleagues	315	0.066	0.242	268	0.136	0.026

¹ Respondents did not answer items that they felt did not apply to them.

'Recognition' was significantly positively correlated with the job satisfaction variable, but this relationship was not confirmed using the corroborating dependent variable of nature of satisfaction. Similarly, 'discussions with colleagues' were significantly positively correlated with nature of satisfaction, but not with the primary variable of job satisfaction. 'Collegial relationships' were not significantly correlated with either job satisfaction or nature of satisfaction.

Correlations between variables: variability in staff groups

It is also important to consider which variables are correlated with satisfaction for nurses, physicians, nursing assistants and other categories of the hospital staff.

Planning

'Planning' appeared to be equally important to all groups of staff; all reported that management was only moderately clear in its goals, plans, and objectives, scoring 10.2-10.9 out of a possible 15.0 (**Table 4**).

Table 4. Scores of the five categories of Pärnu Hospital staff for the ‘planning’ variable.

Staff category	Planning ¹		F-test ²	P-value
	Number of respondents	Score		
Physicians	84	10.9	0.968	0.425
Nurses	165	10.2		
Nursing assistants	82	10.4		
Therapeutic & diagnostics staff	47	10.2		
Administrative and support staff	56	10.4		
Total staff responding ³	434	10.4		
¹ The scores for the ‘planning’ variable ranged from a minimum of 3 to a maximum of 15				
² The Scheffe <i>F</i> -ratio computed is the between-groups variance for all five categories of staff, divided by the within-groups variance for all five categories of staff.				
³ Some respondents felt that the question did not apply to them.				

Relationship with superior

Some groups reported better relationships with their superior than others. Physicians reported the lowest scores in ‘relationship with their superior’ (15.7/25) and nursing assistants reported the highest scores (19.5/25); the differences are significant. Nurses and other staff reported similar scores in their relationships with their superior, in the range of 17.8 to 18.6 (**Table 5**).

Table 5. Variable ‘Relationship with superior’ scores for the five categories of Pärnu Hospital staff.

Staff category	Relationship with superior ¹		F-test ²	P-value
	Number of respondents	Score		
Physicians	83	15.7	5.88	0
Nurses	161	18.3		
Nursing assistants	80	19.5		
Therapeutic & diagnostics staff	44	17.8		
Administrative and support staff	58	18.6		
Total staff responding ³	426	18.0		
¹ The scores for the ‘relationship with superior’ variable ranged from a minimum of 5 to a maximum of 25.				
² The Scheffe <i>F</i> -ratio computed is the between-groups variance for all five categories of staff, divided by the within-groups variance for all five categories of staff.				
³ Some respondents felt that the question did not apply to them.				

Knowledge

Similarly, physicians reported significantly lower scores in knowledge of the hospital goals, plans, budget, results, and staffing problems, scoring 12 out of a possible 16 points compared with 12.8 for nurses, 13.1 for nursing assistants, 13.2 for therapeutic & diagnostics staff and 12.5 for administrative and support staff (**Table 6**).

Table 6. 'Knowledge' variable scores for the five categories of Pärnu Hospital staff.

Staff category	Knowledge ¹		F-test ²	P-value
	Number of respondents	Score		
Physicians	86	12.0	2.41	0.048
Nurses	163	12.8		
Nursing assistants	89	13.1		
Therapeutic & diagnostics staff	49	13.2		
Administrative and support staff	60	12.5		
Total staff responding ³	447	12.7		
¹ The scores for the 'knowledge' variable ranged from a minimum of 4 to a maximum of 16.				
² The Scheffe <i>F</i> -ratio computed is the between-groups variance for all five categories of staff, divided by the within-groups variance for all five categories of staff.				
³ Some respondents felt that the question did not apply to them.				

Work stress

Despite the restructuring of hospitals and reduction of hospital beds reported in Estonia (87) the anticipated high stress levels (2) were not reported by most staff categories. Instead, medium levels of 'work stress' variable were expressed by all staff groups at Pärnu hospital. The measured levels were between 14.1 to 15.8 out of a possible 30 points, with no significant differences between groups (**Table 7**).

Table 7. Variable 'Work stress' scores for the five categories of Pärnu Hospital staff.

Staff category	Work stress ¹		F-test ²	P-value
	Number of respondents	Score		
Physicians	82	15.6	1.67	0.156
Nurses	157	14.8		
Nursing assistants	75	15.2		
Therapeutic & diagnostics staff	48	14.1		
Administrative and support staff	56	15.8		
Total staff responding ³	418	15.1		
¹ The scores for the 'work stress' variable ranged from a minimum of 6 to a maximum of 30.				
² The Scheffe <i>F</i> -ratio computed is the between-groups variance for all five categories of staff, divided by the within-groups variance for all five categories of staff.				
³ Some respondents felt that the question did not apply to them.				

Unrealistic expectations

Similarly, none of the categories of the hospital staff reported that their superiors, patients/patients' families or colleagues presented unrealistic expectations. The 'unrealistic expectations' scores were all relatively low, ranging from 6.4 for administrative and support staff to 7.3 for nurses, out of the possible 20 points, with no significant differences between categories (**Table 8**).

Table 8. Variable 'Unrealistic expectations' scores for the five categories of Pärnu Hospital staff.

Staff category	Unrealistic expectations ¹		F-test ²	P-value
	Number of respondents	Score		
Physicians	82	7.2	1.87	0.115
Nurses	155	7.3		
Nursing assistants	77	6.5		
Therapeutic & diagnostics staff	44	7.0		
Administrative and support staff	46	6.4		
Total staff responding ³	404	7.0		
¹ The scores for the 'Unrealistic expectations' variable ranged from a minimum of 5 to a maximum of 20.				
² The Scheffe <i>F</i> -ratio computed is the between-groups variance for all five categories of staff, divided by the within-groups variance for all five categories of staff.				
³ Some respondents felt that the question did not apply to them.				

Sense of belonging to the organization

Finally, feeling a part of the organization was significantly correlated with satisfaction by all categories of staff (**Table 9**).

Table 9. Variable 'Sense of belonging to the organization' scores for the five categories of hospital staff.

Staff category	Sense of belonging ¹		F-test ²	P-value
	Number of respondents	Score		
Physicians	85	2.9	1.38	0.238
Nurses	162	2.8		
Nursing assistants	87	2.5		
Therapeutic & diagnostics staff	50	2.9		
Administrative and support staff	64	2.8		
Total staff responding ³	448	2.8		
¹ The scores for the 'sense of belonging' variable ranged from a minimum of 1 to a maximum of 5.				
² The Scheffe <i>F</i> -ratio computed is the between-groups variance for all five categories of staff, divided by the within-groups variance for all five categories of staff.				
³ Some respondents felt that the question did not apply to them.				

However, all categories of staff at Pärnu Hospital reported only medium to moderate levels of belonging, with 'sense of belonging' scores ranging from 2.5 to 2.9 out of 5 points.

DISCUSSION

It was expected that the effect of restructuring of hospitals in Estonia would give rise to high ratings of work stress and low ratings of job satisfaction, as predicted by previous studies in Canada (88), the United States (89), and Finland (90,91). However, the levels of work stress reported in this study were at medium levels for all categories of workers. Levels of job satisfaction were moderately high. Moreover, excessive job demands or unrealistic expectations from superiors, patients/patients' families, and colleagues were not reported at high levels. It does not match with effects, as reported by hospital staff in studies of restructuring within Canadian hospitals (88) with longer-term effects on anxiety, depression, and emotional exhaustion.

Job insecurity does not arise without reasons. Hospital staff recognizes organizational efficiency (or lack thereof) and this study measured and found that hospital staff was knowledgeable about the quality of services, the goals, plans, budgetary situation, and

staffing problems, as studies in Finland had found (90,91). This study found that stress at work is negatively correlated with job satisfaction. Items related to sleep disturbance and conflicts at work were particularly significant. Canadian (88) and Finnish studies (90) also found that the effect of downsizing was related to sleep disturbances and conflicts arising from work.

The therapeutic and diagnostics staff scored highest on job satisfaction 4.06 (Table 1) and they also scored highest on variable 'knowledge' 13.2 (Table 6). Conversely, administrative and support staff scored the lowest 3.55 on job satisfaction (Table 1) and scored second lowest on 'knowledge' 12.5 (Table 6).

Hospitals are complex organizations to manage, particularly during a time of consolidation and restructuring with very limited budgets. Nevertheless, this study reaffirms the two classical motivation theories of Maslow (51) and Herzberg (48). Management at Pärnu Hospital appeared to have clear plans, provided sufficient knowledge about the goals and situation of the hospital, paid sufficient attention to supervisory relationships, and attended to stressful situations and working conditions that could erode job satisfaction.

Physicians

Each category of staff has distinct responsibilities. Therefore, it is expected that different sources of satisfaction will motivate physicians, nurses and other health care personnel. Compared with other positions, the work of the physicians is characterized by a higher degree of independence in work planning and decision making; however, this entails a higher degree of responsibility (92,93). To be satisfied with their work, physicians need, first and foremost, information on the economic situation of the hospital, which would allow them to plan optimal treatments for their patients (92). Inadequate resources at a physician's disposal might be one of the factors causing dissatisfaction (94).

Being informed about the economic situation of the hospital was by far the most important factor for job satisfaction for physicians because this allows physicians to estimate how much resources are available for the treatment of their patients and perhaps available for their own income. In addition, relationships with superiors significantly affected physicians' satisfaction with their job. The immediate superior's being adequately informed of the physician's work and being available to talk about the problems encountered by the physician in his/her work was second significant factor with respect to job satisfaction. Furthermore, having a leader who knows the work situation and gives feedback about the work was seen as important. The nearest superior for doctors is usually a more senior specialist or a clinical manager (95). Similarly, findings from other studies indicate that positive feedback and acknowledgement of work done are factors that increase a physician's job satisfaction, whereas indifference by superiors may lead to feelings of dissatisfaction in their subordinates (79,92,93).

Nurses

If physicians still retain control over diagnosis and treatment of the patients, then with the increasing concern with holistic care, including nutrition, physical comfort, personal hygiene, mobilization, communication, emotional care and social support, a growing proportion of responsibility for patient care lies with the nurse (96) and, to some extent, with other hospital staff.

Common factors affecting satisfaction for non-physicians (nurses, nursing assistants, therapeutic and diagnostic staff, administrative and support staff) were a heavy workload and an uncertain or stressful work environment.

The predictors of job satisfaction for nurses include organizational and professional working conditions as well as personal dimensions (95).

A heavy workload was the most influential variable in determining job satisfaction for nurses. Furthermore, other studies of work-related stress in nurses have shown that irregular working hours, often involving overtime is the main source of stress and that excessive stress at work may be one of the factors causing dissatisfaction (19).

Nurses are in constant communication with their patients, listening to their problems and enabling them to feel comfortable during the entire period of treatment. The great responsibility involved, the high workload, and the little latitude in the decision-making process increases work-related stress (94). Aiken and others found that nurses experience frustration and burnout because of lack of control over work conditions that determine the job for which they are responsible. Additionally, other studies have shown that nurses felt that they were not treated as clinicians or peers by doctors and hospital managers but as assistants, at risk of being replaced by less-qualified personnel who cost less to employ (97,98).

Studies of nurse burnout within magnet hospitals in the United States concluded that professional development, cooperation with medical staff and managerial support were highly important for nurses (99). Findings are confirmed by this study, where feelings of being an integral part of the organization and relationships with the immediate superior correlated with higher scores of job satisfaction.

For nurses, important prerequisites of job satisfaction are support and encouragement from one's immediate supervisor and the possibility of confiding one's professional and personal concerns to one's immediate superior. Nursing managers must allow nurses latitude to decide what is relevant in order to achieve the objectives of the treatment plans of their patients, because nurses value the work itself as much as recognition, status and job security (99).

Furthermore, important factors contributing to job satisfaction were, perceiving oneself to be an integral part of the hospital as a unified organization, and having the freedom to decide on the sequence of fulfilling professional duties. Moreover, being disagreeably treated by supervisors and conflicts at work were factors that negatively influenced job satisfaction.

Also, Krogstad et al demonstrated the importance of leadership and effective management. They noted, that focusing on local leadership, the importance of being encouraged and supported by the nearest leader points to the need to be seen and appreciated. The significant predictors of the nurses' explanatory model included the local leader's knowledge of the work situation and providing support and feedback (95). Taormina et al. demonstrated that employees who feel rewarded for the work they perform tend to feel satisfied in their jobs and careers. In other words, nurses who feel that their hospital (organization) provides them with rewarding relationships and supports their careers will be better able to endure the strains of their job and their profession (100).

Nursing assistants

The work of nursing assistants is tiring and their workload is high; it had impact on job satisfaction of nursing assistants also accordingly to current study. Often, the work of nursing assistants is not considered to be important, and is not given the appreciation it is due. Unlike workers with higher status, for nursing assistants the attitude of fellow workers had the greatest impact on job satisfaction. Once basic job security and pay issues are settled, the most important sources of satisfaction for lower and middle level workers are relationships with co-workers and supervisors (99,101). Being disagreeably treated by fellow workers was the most important reason for dissatisfaction among nursing assistants.

A nursing assistant's immediate supervisor being informed about her work helps the nursing assistant to sense the importance of her work and is therefore a significant factor promoting job satisfaction. To a small extent, feeling of being the integral part of the hospital also influenced job satisfaction for nursing assistants.

It seems to be in accordance with the conclusions of Krogstad et al, who pointed out, that nursing assistants draw their professional identity and loyalty more from the collective of the organization than from their own professional group. Having little chance of formal promotion, their prospects for professional acknowledgement and respect lay in the building of informal competence and the reputation of their local hospital (95).

Blegen's meta-analysis of 48 studies looked at work satisfaction in over 15000 nurses revealing that job satisfaction was associated strongly with reduced work stress, organizational commitment, communication with superiors, autonomy, employee recognition, fairness, locus of control, years of experience, education and professionalism (102). The first three factors were significant for nursing staff in this study.

Therapeutics and diagnostic staff

Health professionals in the therapies, such as instructors of remedial gymnastics and physiotherapy, and diagnostics personnel such as laboratory technicians, radiologists, and other functional diagnosticians, work mostly by themselves and their professional duties are more objectively defined, but sometimes less understood than the duties of

physicians, nurses, and nursing assistants. For this group of health care workers, clear goals of hospital leaders provide assurance that they'll have a job tomorrow and that the existence and interests of this specific group of workers shall be taken into account, thereby increasing their job satisfaction. It also explains the negative correlation with unrealistic expectations of superiors. The literature suggests that existence of an organizational structure acceptable to workers and the possibility of regulating one's workload increases job satisfaction in laboratory workers (46).

Administrative and support staff positions

The professional duties of those working in administrative and support positions (such as accountants, secretaries, and operations personnel) are quite different from those in direct health care positions. Job satisfaction among non-health personnel was influenced by physical and mental exhaustion caused by high workloads. When the immediate superior of administrative and support staff has clear objectives and is able to promote these to the staff, the job satisfaction among this group of non-clinical staff increases. Attending to the needs of the administrative and support staff for recognition and resolving their work related problems is the most important task for the managers of those professionals who are not involved in the provision of direct care to patients (101).

For many of those working in administrative or support positions, being disagreeably treated by their fellow workers, is also a factor causing dissatisfaction.

Executives

The top managers and leaders of structural units at the hospital formed a distinct group. Their ratings of job satisfaction were considerably higher than those of all the other employees. The job satisfaction of those working in leading positions was influenced by the availability of opportunities for professional development. By virtue of their positions of authority, senior executives are most motivated by possibilities for growth and the achievement of objectives (103,104). It is also noted, that lower levels of decision latitude was associated with increased job stress for executives (105). Similarly to the two previous groups the clear objectives of superiors shall increase the job satisfaction of the executives.

CONCLUSIONS

The management of Pärnu Hospital seems to have captured the commitment of the staff to the hospital, as indicated by predominantly positive responses to the items 'Proud to be working at the hospital' and 'Willingness to make the extra effort', along with the predominantly negative responses to the items 'Nothing here depends on me' and 'My future and that of the hospital are not and will not become compatible'. These four items were shown to be important to organizational commitment in the studies of American hospital staff by Luthans and Sommers, most likely due to good relationships

with their supervisors (89). They also feel that they are an integral part of the hospital (89). However, there appears to be room for improvement in the satisfaction ratings of the staff at Pärnu Hospital. Collegial relationships and recognition were measured in this study and found to have little significant impact on job satisfaction, except for workers in lower paid positions. Finnish studies (91) have also confirmed the importance of collegiality and supportive supervisory relationships. Feeling a part of the organization was found to be significant in this study.

Managing hospitals during a time of consolidation is challenging and organizational efficiency and commitment can make the difference between a hospital remaining open and being closed. The community also plays an important role in supporting its hospital. Hospital staff cannot provide quality services in an efficient manner if the majority of the people in the immediate and surrounding communities would prefer to receive their services in another hospital (106). Effective managers communicate the successes of their hospital, attend to the difficulties, and support their staff in every possible way. And for their part, hospital staff should be committed to the work of their hospital, giving extra effort in periods of difficulty and being devoted to the care of patients and their families.

The findings of this study suggest that executives of a health care institution that are informed about the expectations and daily work-related problems of their employees are better able to understand the needs of their employees. Executives should: 1) build up effective relationships between managers and staff; 2) identify negative working conditions which affect staff; 3) appropriately delegate authority to personnel, and hold them accountable for the work done in their organizational units; 4) keep staff informed about changes that will affect them; and 5) express appreciation and recognition for the efforts of staff members in accomplishing the work of the health care organization. In doing this, executives will create a favourable working environment for the hospital staff.

Although this study conducted in Pärnu, Estonia, was of a cross-sectional design, it drew upon the insights of international longitudinal studies. Estonia is a re-emerging democracy and, as such, exploratory and descriptive methods are within the budgetary limits of researchers at this time. Certainly, the insights of this study will be used to design more rigorous longitudinal studies, as cross-sectional designs generally cannot provide predictive explanations (107).

The value of the study is that the results can (and are) being used as a set of reference levels and indicators for the human resources development component of the quality management system of Pärnu Hospital.

A final contribution of this study is its focus on all major staff categories working in the hospital. While there are a number of surveys of job satisfaction, job stress, burnout and turnover of physicians and nurses, there is a scarcity of studies about other members of the healthcare team. Assessing the effectiveness of hospital quality systems, such as process management and improvement, require the inclusion of all members of the quality chain. This is supported by the movement towards focusing on the specific staff

categories and systems in organizations, with the argument that no system can be better than the microsystems of which it is composed (95).

After this study was conducted, staff satisfaction surveys in Pärnu hospital are performed on regular basis. Results are used in remodelling of hospital development plans and in elaboration of management decisions.

Later surveys revealed, that meanwhile ratings of majority of aspects (or variables) of job satisfaction (e.g. relationship with superiors, worker's control latitude) have improved, then reported overall job satisfaction rating has made a significant step downwards between the first survey and second survey (2002) and, despite demonstrating slow upward trend in consequent surveys (2003, 2005), however has not restored its positions.

This equivocal behaviour of measured ratings can be a result of a combination of factors, which induce changes in overall job satisfaction rating by hospital staff between two first surveys.

Among these factors should be noted:

- accumulation of results of increasing openness of the society and of contacts with the colleagues and healthcare facilities abroad, thus facilitating introduction of new reference levels for working conditions;
- increase in professional self-esteem of medical workers;
- need to accept and cope with involvement of emerging market forces in healthcare system;
- the first survey, being the first case when the opinion of hospital staff on working conditions was extensively requested, caused the wave of favourable sentiment, which did not recur during consequent surveys;
- for pragmatic purposes in the first survey the questions for rating the satisfaction with wages and other tangible rewards were purposefully omitted, as these would be predictably low and, if asked, would curtail these aspects of job satisfaction, which could be sufficiently improved within the borders of financial capacity of a hospital of that time. In consequent studies these questions were included, therefore indirect influence of dissatisfaction with wages to the overall rating of job satisfaction cannot be excluded.

Having stated that, the researcher can appoint that the downward step was especially noticeable in the reported job satisfaction of physicians and nurses. It is an indirect confirmation of the likelihood of strong involvement of the policy of wages on job satisfaction.

After accession to EU in 2004, the promotion of free movement of people has escalated the desire to move to jobs in older member states of EU by many healthcare workers. Active recruitment systems of other EU countries that provide information and cover travelling and language learning costs may significantly increase the number of health care professionals leaving Estonia. The most important reason that health care workers

state for why they plan to work abroad is better wages, but the wish to gain experience in other countries is also important (108).

To make a prognosis on the mobility of health professionals within EU, a survey was carried out in late 2003 among representative samples of Estonian medical workers. The results show that about half (56%) of them would like to work abroad and around 5% (about 700-800 health care workers) have definite plans to leave the country (108). The finding that half of the health sector workers want to work abroad is a warning signal. Departure of qualified workforce involves the need for re-arrangement and alignment of workplaces, and has a potential to increase remarkably the *per capita* workload in local healthcare settings.

For the time being Pärnu Hospital has a relatively good starting position to become an attractive workplace for healthcare professionals. In 2005 a new hospital building was opened, which concentrated the disseminated hospital departments into one single facility. The up-to-date hospital rooms are well equipped with modern technologies, thus facilitating improvement of workplace environment and working arrangements. The task of the hospital management is to work out and to implement the human resources policy, which supports retention through overall job satisfaction. It should be supported by sound governmental policy of wages and benefits for healthcare professionals.

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Staff job satisfaction questionnaire ²

1. Profession:

Nurse	<input type="checkbox"/>
Auxiliary nurse	<input type="checkbox"/>
Physician	<input type="checkbox"/>
Other health profession (<i>physiotherapist, statistician, x-ray nurse, laboratory assistant etc.</i>)	<input type="checkbox"/>
Non-medical profession (<i>teacher, psychologist, book-keeper, director etc.</i>)	<input type="checkbox"/>

2. Gender:

Female
Male

3. Age

4. Type of job

full-time
part-time

5. Generally speaking, how satisfied are you with your job? Please indicate your evaluation using the following 5-point scale (5- very satisfied, 4 - quite satisfied, 3 - neither satisfied nor dissatisfied, 2 - rather dissatisfied, 1 - very dissatisfied)

.....

6. How long have you been working at the Pärnu County Hospital? If you have worked less than one year, write the number of months you have worked here.

.....

7. How well do the following statements describe your relationship to the hospital?

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree
"I'm proud that I am working at Pärnu Hospital"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
"I'm willing to put in an extra effort to help the hospital"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
"I don't feel part of this hospital, nothing here depends on me"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
"The future of the hospital does not concern me"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Do you plan to quit your job at the Pärnu County Hospital and start working somewhere else?

No
 Yes, because of further training / education
 Yes, because of family obligations
 Yes, for other reasons
 (*please specify*)

.....

² Source: The job satisfaction questionnaire, developed by the Foundation for Health Services Research (Norway), adopted for the Pärnu County Hospital (with authors' permission)

9. How many overtime hours do you work in a usual week?

In all hours,
 at my own wish hours
 I don't work overtime hours

10. How often do you have to do the work of colleagues who are ill or absent for other reasons, in addition to your own regular work?

Never
 Seldom
 Sometimes
 Quite often
 Very often
 Does not apply

11. During an average week, how many hours (approximately) do you spend

in meetings discussing specified patients hours
 educational / training meetings hours
 administrative or staff meetings hours
 direct contact with patients hours
 doing necessary paper work hours

12. How well do the following statements fit?

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree
Politicians are well informed about our work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The hospital leaders are well informed about our work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The hospital leaders have clear goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My department head has clear objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I waste a lot of time because of bad planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know exactly who is my immediate superior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Far too much of my time is spent in meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At the Pärnu Hospital, good work means better income	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Describe your relationship to your immediate superior by assessing the following statements?

	Not at all	Rarely	Sometimes	Often	Always
I have the opportunity to talk with my immediate superior about difficulties in my work	<input type="checkbox"/>				
I can trust my immediate superior with personal as well as work related concerns	<input type="checkbox"/>				
My immediate superior is well informed about my work	<input type="checkbox"/>				
My immediate superior is supportive and builds up my confidence	<input type="checkbox"/>				
My immediate superior tells me when I am doing a good job	<input type="checkbox"/>				
My immediate superior arranges for me to grow and develop new skills in my job	<input type="checkbox"/>				

14. How much information do you have about

	Completely informed	Somewhat informed	Poorly informed	Not at all informed
hospital goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
future plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
economic situation, budget	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
results achieved and progress toward goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
staffing problems among workers in your department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. In your opinion, do you need more information about following circumstances when on duty?

	Yes	To some extent	No	Don't know
hospital goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
future plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
economic situation, budget	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
results achieved and progress toward goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
staffing problems among workers in your department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Do you have leadership responsibility?

yes
 no go to the question nr. 18

17. How do the following statements fit?

	Not at all	Rarely	Sometimes	Mostly	Completely
My colleagues understand that I as a leader sometimes have to address delicate questions	<input type="checkbox"/>				
My colleagues support me when needed	<input type="checkbox"/>				
My colleagues trust me	<input type="checkbox"/>				
I as a leader have a responsibility to arrange for my colleagues (subordinates) training courses	<input type="checkbox"/>				

18. How would you describe the follow-up of your work performance compared to five years ago?

Stricter	<input type="checkbox"/>
Unchanged	<input type="checkbox"/>
Less strict	<input type="checkbox"/>
Don't know	<input type="checkbox"/>
Don't know, I was not in Pärnu Hospital five years ago	<input type="checkbox"/>

19. How often do you have so much work that you feel restless and nervous?

Seldom or never
 Sometimes, but not every day
 Daily, but less than half the day
 Daily, more than half the day

20. To which degree can you yourself decide

	Not much	To some extent	Very much
your pace of work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
the sequence of your tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. How tiring is your work?

	Not at all tiring	Not particularly tiring	Somewhat tiring	Tiring	Very Tiring
Physically	<input type="checkbox"/>				
Mentally	<input type="checkbox"/>				

22. How often does thinking about problems at work disturb your sleep?

- Never
- A few times a month, or less
- About once a week
- A few times a week
- Daily

23. How often are you so tired after work that you have difficulty dealing with responsibilities at home, visiting friends, or pursuing a hobby?

- No, practically never
- Rarely
- Sometimes
- Yes, quite often
- Yes, very often

24. How often have you been depressed or disturbed by conflicts arising at work?

- No
- Yes, a few times a month
- Yes, about once a week
- Yes, a few times a week
- Yes, daily

25. During the last year, have you been the victim of unpleasant harassment by

	No	Yes, a few times a month	Yes, about once a week	Yes, a few times a week	Yes, daily
colleagues?	<input type="checkbox"/>				
superiors?	<input type="checkbox"/>				
subordinates?	<input type="checkbox"/>				
patients and/or their family members?	<input type="checkbox"/>				

26. Is / are there anyone at your place of work that you're on such bad terms with that you consider him/her/they your enemy (-ies)?

- No
- Yes
- Don't know

27. How often do you discuss with your colleagues the following problems/difficulties relating to:

	Seldom / never	Some-times	Often	Almost always
diagnosis / treatments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
patient care plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
patients` or their families`	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
personal matters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
own illness / health problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. How often do you discuss with your immediate superior the following problems/difficulties relating to:

	Seldom / never	Some-times	Often	Almost always
diagnosis / treatments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
patient care plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
patients` or their families`	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
personal matters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
own illness / health problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29. Did you get unrealistic expectations from:

	No, rarely	Yes, sometimes	Yes, often	Don't know
superiors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
colleagues at other institutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
patients and their families	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
bureaucrats at the ministry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. How often are you praised or rewarded for making an effort?

	Never / seldom	Sometimes	Often	Don't know
By colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By colleagues at other institutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By superiors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By patients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31. The hospital is a complex organisation. How much do you feel that you are an integral part of the hospital?

- Never
- Rarely
- Sometimes
- Often
- Completely

32. To what degree is cost a decisive factor in questions of:

	Very Important	Important	Somewhat Important	Not at all important	Don't know
patient treatment	<input type="checkbox"/>				
patient care plans	<input type="checkbox"/>				

33. How often, in your experience, do patients have problems that are left untreated because

	Never	A few times a month	Once a week	A few times a week	Daily/ almost daily
the budget does not allow their solution	<input type="checkbox"/>				
staff competence does not suffice	<input type="checkbox"/>				
the organization of work precludes it	<input type="checkbox"/>				

34. How often is it possible for you to follow a patient for several consecutive days?

Always / almost always	<input type="checkbox"/>
Pretty often	<input type="checkbox"/>
Not as often as I would have liked to	<input type="checkbox"/>
Pretty rarely	<input type="checkbox"/>
Never / almost never	<input type="checkbox"/>
Dealing with patients (treatment, nursing) is not my responsibility	<input type="checkbox"/>

35. How important is it, in your opinion, to follow patients for several consecutive days?

	Not important	Not very important	Moderately important	Very important	Don't know
To the patient	<input type="checkbox"/>				
To yourself or to the ward	<input type="checkbox"/>				

36. How often do you discuss patient observation / plans-results with personnel from other professions?

Several times a day	<input type="checkbox"/>
Daily	<input type="checkbox"/>
Not as often as I would have liked to	<input type="checkbox"/>
Pretty seldom	<input type="checkbox"/>
Very seldom	<input type="checkbox"/>
Dealing with patients (treatment, nursing) is not my responsibility	<input type="checkbox"/>

37. How important is information from other professions about the patient to you?

Not at all important	<input type="checkbox"/>
Not much important	<input type="checkbox"/>
Moderately important	<input type="checkbox"/>
Very important	<input type="checkbox"/>
Dealing with patients (treatment, nursing) is not my responsibility	<input type="checkbox"/>

38. How often do you find that different professional groups differ in their aims for the patient during hospitalisation?

Very often	<input type="checkbox"/>
Quite often	<input type="checkbox"/>
Often, but far from always	<input type="checkbox"/>
Rather seldom	<input type="checkbox"/>
Very seldom	<input type="checkbox"/>
Dealing with patients (treatment, nursing) is not my responsibility	<input type="checkbox"/>

39. Do you have difficulties to communicate with patients

	Never	Sometimes	Often	Don't know
in Estonian?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
in Russian?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

40. Do you have difficulties to communicate with your colleagues

	Never	Sometimes	Often
In Estonian?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In Russian?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Your comments:

Thank you!

Published paper

1. Kaarna M, Põlluste K, Lepnurm R, Thetloff M. The progress of reforms: job satisfaction in a typical hospital in Estonia. *Int J Qual Health Care* 2004;16(3):1-9.

