ORIGINAL ARTICLE

The well-being of Hungarian nurses in a changing health care system

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ABSTRACT

Aim Present study aimed to investigate how nurses perceived the alteration of the Hungarian health care system at their workplaces. Furthermore, it was examined how uncertainty caused by the changes affects the positive and negative well-being of nurses.

Methods The cross-sectional study was conducted in six Hungarian hospitals during the period between October and December 2010. The questionnaire used contained questions regarding socio-demographic data, the Well-being Scale, the Job Demand Scale, the Job Control Scale, the Job Social Support Scale and six self-developed questions to investigate uncertainty. Data of 1048 person were analyzed with SPSS 18.0 statistical programme. Descriptive statistics, factor analysis and unpaired two-sample t-test were conducted.

Results The alteration of the health care system affected the workplaces of 64.6% of the respondents. The fear of losing the co-workers ($p<0.001$), of relocation into another ward/department ($p=0.001$) and of reduction of wage ($p<0.001$), furthermore, inability to attend in-service trainings ($p=0.009$) occurred significantly more often among those who experienced the reorganization. Beside work demand, control and support also uncertainty contributed significantly to the explanatory power of the nurses' positive ($p=0.003$) and negative ($p<0.001$) well-being.

Conclusion The intensive feeling of uncertainty increased the negative well-being of the nurses. As control and support at the workplace reduce the feeling of uncertainty they need to be enhanced. Workplace leaders might have a big role in this and they could also give nurses more opportunities to shape their workplace environment.

Key words: nurses, uncertainty, occupational health.

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INTRODUCTION

As other health care systems in Europe the Hungarian health care system has been undergoing continuous changes in the last decade. The negative effects of these alterations are experienced mostly by those who work every day in direct patient care. The Act CXXXII of 2006 (1) designated special institutes with national competence and priority hospitals, furthermore defined the number of active hospital beds. After this Act came into force numerous institutions were closed and reorganized, institutions and departments were contracted, which changed the everyday life and working environment of the health care providers.

The decrement of hospital bed numbers changed the structure and organization of hospitals and wards. The number of active hospital beds diminished by thirty-thousand between 1990 and 2008. The number of chronic care beds increased by seven-thousand (with 30%) from 2006 to 2007 (2). The wages of health care providers showed an increasing tendency until 2008, while it decreased in 2009. In the period between 2003 and 2010 the number of nurses working in hospitals and health centres was reduced by 10.4% (3). There is a vast lack of nurses in the field of intensive care, theatre nursing, oncology and psychiatry; furthermore the average age of health care providers is increasing (4,5). Besides the shortage of the health care personnel (especially nurses) the working environment can not be seen as optimal either. Both the physical circumstances and the every day stress caused by the organizational changes result in an unfavourable situation for nurses in Hungary. Everyday tasks have to be accomplished with old and anachronistic instruments, sometimes even the most basic work safety tools are missing e.g. rubber gloves (6).

Organizational changes (e.g. integration) significantly affect the stress-level, psychological well-being and work performance of the nurses (7,8). Many people might react with fear, anxiety, feeling anger, depression or uncertainty to organizational alterations (9,10).

The fast and radical reorganization of the health care system and the changing working environment might threaten the physical health of the nurses (e.g. disorders of the skeletal muscles, work injuries) (11). The reorganization of the hospital structure and the cut-backs affect job satisfaction and the psychological health of nurses as well (12). Uncertainty regarding workplace and the possibility of losing one's job (cut-backs) influence the well-being and health condition of nurses (13).

Present study aimed to investigate whether nurses experienced any effect of the alteration of the Hungarian health care system at their workplaces. A further question was if nurses felt uncertainty because of the changes, and how this affected the positive and negative well-being of nurses in the dimensions of demand, control and support.

EXAMINEES AND METHODS

The presented cross-sectional study was conducted during October-December 2010 in six Hungarian hospitals using a self-developed questionnaire which consisted of 77 questions. The questions concerned socio-demographic data furthermore the Well-being Scale (14), the Job Demand Scale, the Job Control Scale and the Job Social Support Scale (15,16) were inserted. As in the international literature no data were found regarding uncertainty caused by the reorganization of the health care system, self-developed questions were applied. These questions concerned experiences during bedside work of the authors leading to significant uncertainty in everyday patient care work. Six questions were formulated: How much trouble or problems have you experienced in the last years because of: the fear of losing your co-workers, the fear of being transferred to another ward/department, the possibility of decreased wage, the fear of the limited promotion opportunities, not being able to attend professional trainings, not being able to get a new, higher level qualification. The items were evaluated in a five-point scale (1=none, 2=a few, 3=some, 4=lots of, 5=particularly many). Higher scores calculated from the six items indicated higher level of uncertainty.

Inclusion criteria were the following: at least one year of employment at present workplace, female sex, involvement into patient care, no leading position.

Initially 1587 questionnaires were sent to the hospitals and 1048 of them (response rate was 66.03%) were involved in the final analysis. The average age of the responders was 38.47 years, 13.6% of them do not have a high school degree, while 70.9% have it and 15.5% of them have college or university degree. On

average the responders work for 17.4 years in health care, for 14.8 years at their present workplace. From the studied population 5.2% worked at an intensive care unit, 32.7% at medical wards, 24% at surgical wards, 15.6% at paediatric wards, 14.8% at chronic inpatient wards and 7.8% at psychiatric wards.

Beside descriptive statistics, factor analysis, multivariate linear regression model and unpaired two-sample t-tests were applied. The level of significance was set at 5%. The participation in the survey was voluntary, questionnaires were filled in anonymously. Necessary information regarding the questionnaire was given both in writing and orally before the completion of the research tool. The participation in the survey was not required and could be terminated any time. The research process was approved by the Doctoral Programme Committee of the Faculty of Health Sciences of the University of Pecs.

RESULTS

The reorganization of health care system affected the workplaces of 677 (64.6%) of the responders, 546 (52.1%) had decreased wage, in the case of 410 (39.1%) the person of head had changed, 226 (21.6%) had new equipment, 217 (20.7%) felt that they had less opportunity to attend professional trainings, 159 (15.2%) were transferred into another ward and 39 (3.7%) were laid off.

In the past few years the most trouble was caused by the fear of decreasing wages among the respondent nurses. They gave on average 3.77 points on this item, 386 (36.8%) of them said that this led to lots of problems and 289 (27.6%) felt particularly many worries about it. Transference scored on average 2.53 points, 153 (14.6%) of the nurses had 'lots of' and 36 (3.4%) had particularly many disturbing thoughts in connection with this. Thirteen percent of the responders had 'lots of' or particularly many problems because of the fear of losing co-workers (average score of 2.48). The inability to attend in-service trainings (average score of 1.83), limited promotional opportunities (average score of 1.67) and access to new, higher level degrees (average score 1.71) were the least worrying for them.

Among those who experienced reorganization of their workplaces the levels of fear were significantly higher regarding losing co-workers ($p<0.001$), being transferred to another ward/department ($p=0.001$), decreasing wages ($p<0.001$) and not being able to attend professional trainings ($p=0.009$). There were no significant differences concerning worries about limited promotional opportunities ($p=0.267$) and not being able to get higher level education ($p=0.316$).

The analysis of the dimensions of the demand-control-support model revealed that demand is significantly higher among those who experienced the alteration of the health care system compared to those who did not ($p=0.003$). This was accompanied by significantly stronger feeling of uncertainty ($p<0.001$).

The six questions concerning uncertainty can be characterized with two five-point subscales each containing three items. The first scale regards own needs and desires, so it was named intrinsic uncertainty (limited promotional opportunities, could not attend professional trainings, could not get higher level education; Cronbach's alpha=0.630). The second scale consisted of factors related to uncertainty caused by workplace environment (losing co-workers, transference to another ward/department, decreasing wages; Cronbach's alpha=0.776). The applicability of the uncertainty subscales is verified by the values of Cronbach's alpha. Higher control ($p=0.026$) and support ($p=0.002$) were correlated with significantly lower levels of intrinsic uncertainty.

In the analysis of positive well-being uncertainty was also an explanatory variable besides demand, control and support. These four variables together were significantly correlated with the level of positive well-being ($p<0.001$) and they were separately also correlated with it

Table 1. Correlations of positive well-being

Factors	Regression coefficient	p	Beta weight	Correlation with positive well-being	R^2
Demand	-0.045	0.000	-0.237	-0.318	7.5%
Control	0.024	0.003	0.091	0.183	1.7%
Support	0.043	0.000	0.129	0.249	3.2%
Uncertainty	-0.037	0.003	-0.087	-0.159	1.4%
				Total	**13.8%**

Table 2. Correlations of negative well-being

Factors	Regression coefficient	p	Beta weight	Correlation with negative well-being	R^2
Demand	0.039	0.000	0.199	0.261	5.2%
Control	-0.021	0.019	-0.074	-0.132	1.0%
Support	-0.012	0.306	-0.034	-0.139	0.5%
Uncertainty	0.071	0.000	0.161	0.216	3.5%
				Total	**10.1%**

(demand: p<0.001; control: p=0.003; support: p<0.001; uncertainty: p=0.003). The explanatory power of the model was 13.81%, to which demand contributed the most (7.5%). The added value (1.4%) of uncertainty was significant (p=0.003). Higher positive well-being correlated with lower level of the feeling of uncertainty (p<0.001) (Table 1).

In the analysis of negative well-being uncertainty, demand, control and support together were significantly correlated with the level of negative well-being (p<0.001). Demand (p<0.001), control (p=0.019) and uncertainty (p<0.001) were significantly correlated with the level of negative well-being, but support was not related to it (p=0.0306). The explanatory power of the model was 10.1%, to which demand contributes the most (5.2%) and uncertainty was the second strongest (3.5%) factor. Higher level of negative well-being was correlated with stronger feeling of uncertainty (p<0.001) (Table 2).

DISCUSSION

The presented study revealed that most of the responder nurses experienced at their workplaces the alteration of the health care system (e.g. cutbacks, changed boss, transference to another ward, etc.). High workplace demand was correlated with high level of uncertainty, while higher level of control and support was associated with lower level of intrinsic uncertainty. Stronger uncertainty influenced the well-being of the involved people negatively. This result is similar to the outcome of Karasek's study (15), however he investigated workplace uncertainty from another aspect.

Earlier studies pointed out that higher levels of demand and lower levels of social support negatively affected the health care providers (17). Support from the superiors is one of the most important sources of social support at the workplace and helps to cope with problems (18).

In order to reduce the feeling of uncertainty, more control should be given to the staff (12,19). This would allow the employees to shape their working environment and circumstances (4,5,8). Superiors should show more support towards their workers, i.e. including the staff development and underpinning the participation on trainings and on further education (12). As there is a limited literature on this kind of uncertainty caused by reorganization of the health care system with the above described six questions (6,7), more research is needed. Furthermore, not only health care personnel should be involved, but also other working areas where there are changes undergoing. Special attention should be paid on student nurses and nurses at the beginning of their careers, as they are under the most strain because of the uncertainty of career starting. This would be important also because stress could influence the intent of leaving the profession (19,20).

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