Report No 7:2003

Working conditions and intent to leave the profession among nursing staff in Europe

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NEXT nurses' early exit study

FIFTH FRAMEWORK PROGRAMM

A research project initiated by SALTSA and funded by the European Commission (QLK6-CT-2001-00475)
www.next-study.net

coordinated by UNIVERSITY OF WUPPERTAL

Arbetslivsinstitutet
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The National Institute for Working Life and The Swedish Trade Unions in Co-operation

ISSN 1404-790X

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Web: www.arbetslivsinstitutet.se/saltsa
Printed at Elanders Gotab
ISSN: 1404-790X

11 Work ability in the nursing profession

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Introduction

The conceptualisation of 'work ability' that is chosen in this contribution has to be understood in a preventive context where interventions ensure that workers are properly accommodated and that future alienation, work disability and premature retirement will be minimized. Nowadays, one of the most important challenges in the domain of personnel management is to find out whether influential factors (i.e. work conditions) can be detected that stimulate or hinder the development of individual employability throughout a career. Employability can be defined as 'the behavioural tendency directed at acquiring, maintaining and using qualifications that are aimed to enhance the ability to cope with a changing labour market during all career stages' (van der Heijden & Thijssen, 2003).

Work ability as a personal characteristic can be interpreted as being an important component of the broader concept of employability. It refers to both individual and occupational factors that are essential to a person's ability to cope in working life (Ilmarinen, 1999). More specifically, it is the worker's perception of own work ability. It is a self-assessment based on commitment, educational and training background, work history and transferable skills, current work status and relationship with supervisor, social activities, support systems and fitting needs (Ilmarinen, 1993).

The work ability index (WAI) has been developed in the early 80's by researchers from the Finnish Institute of Occupational Health (FIOH) as an instrument aimed at evaluating how well workers are performing in their present job and how their performance is expected to be with respect to future work demands, health, and mental resources (Tuomi et al, 1991).

The model underlying the WAI is mainly explained by four factors: job demands and environment (28% of explanation rate), work organization and work community (20%), professional competence (15%) and life style (13%) (Tuomi, 2001). More specifically, these four factors significantly influence how well or how poorly a worker uses his or her resources. A system of feedback exists on how he or she is doing at work and it models and improves his/her motivational factors too. The WAI can be used as a monitoring instrument for both individuals and groups among occupational health personnel; it has proved

to be helpful in high stress level detection and prevention (Kloimuller et al., 2000), a predictor for disability pension and mortality (Tuomi et al., 1991a, 1997) and a good indicator of occupational risk factors for early retirement (Tuomi, 2001).

The WAI has been translated into 15 languages and is highly applicable for cross-cultural comparisons. An international network initiated by the National Age Programme (1998-2000) has collected a huge database using WAI in order to focus on determining factors that affect work ability in different age stages. The NEXT-Study provides an opportunity to study perceived work ability, it's change in the light of ageing, and the effects of influential factors in different countries. The aim of this contribution is to study the relationship between work ability and turnover intention among nurses.

Methods

The use of the WAI is easy and quick; the questionnaire entails seven dimensions, each covered by means of one or more questions: current work ability compared with the best during one's lifetime (0-10 points), work ability in relation to the demands of the job (2-10 points), number of diagnosed diseases (1-7 points), subjecttive estimated work impairment due to diseases (1-6 points), sickness absence during past year (1-5 points), own prognosis of work ability two years later (1, 4 and 7 points) and mental resources (1-4 points). The WAI is calculated by summing the points for each item. The final index-score ranges from 7 to 49 points. Work ability is considered as 'poor' if the WAI score has a range of 7 to 27, as 'moderate' if it ranges from 28 to 36, as 'good' if it ranges from 37 to 43 and as 'excellent' if the range is 44 to 49. In a longitudinal study (Tuomi et al., 1998), the 15th percentile of the index distribution was used as the cut-off point for poor and excellent work ability. The moderate and good classifications have been determined by using the median.

A slightly adapted version of the WAI questionnaire was used to assess work ability. The third dimension 'number of diagnosed diseases' has been shortened before submission. As our modification of the WAI might result in somewhat higher WAI scores for our respondents, comparisons with other empirical results of WAI studies must be carried out taking this into account. The WAI score was calculated according to instructions provided by FIOH (Tuomi et al., 1998).

Data collection

In Table 1, the response rate for the WAI by country is reported.

Data analysis

Age, gender and type of institution have been taken into account in this preliminary analysis phase in order to establish their relationship with WAI

scores and to establish their effect upon the relationship between WAI and intention to leave the nursing profession. The overall analysis shows that the distribution of the WAI score is skewed to the left (skewness: -0.95), that is to say that non parametric analysis is to be preferred. During this research stage, descriptive analyses, parametric - non parametric univariate tests, Spearman's correlation, the relative risk estimate have been performed using SPSS 11.5.

Results

WAI scores were lowest for the Polish and French samples (36.3-37.8) and highest for the Dutch one (41.4) (see Table 1). The test for differences between *countries* was significant (Kruskal Wallis: Chi-Square =2810 (df =9), p-value.000).

Table 1. Respondents per country for the Work Ability Index (WAI) and nurses' mean WAI by country.

country	total subj. n	WAI valid n	mean	s.d.	min.	max.
Belgium	4,257	3,859	39.7	5.0	14	49
Germany	3,565	3,373	37.9	6.3	10	49
Finland	3,970	3,750	39.9	5.8	9	49
France	5,376	4,306	37.8	5.7	9	49
United Kingdom	2,578	2,318	39.7	5.7	7	49
Italy	5,645	4,073	39.6	5.3	9	49
Norway	2,733	2,262	42.0	5.3	13	49
Netherlands	4,019	3,927	41.4	4.9	12	49
Poland	3,263	3,073	36.3	6.0	14	49
Slovakia	3,396	3,093	39.4	4.8	19	49
All	*33,491*	*29,454*	*39.1*	*5.6*	*7*	*49*

When we take *type of institution* into account, the results point out that in most countries nurses working in *old peoples' homes* have the worst WAI score (Kruskal-Wallis: Chi-square 138 (df=2, p<.000).

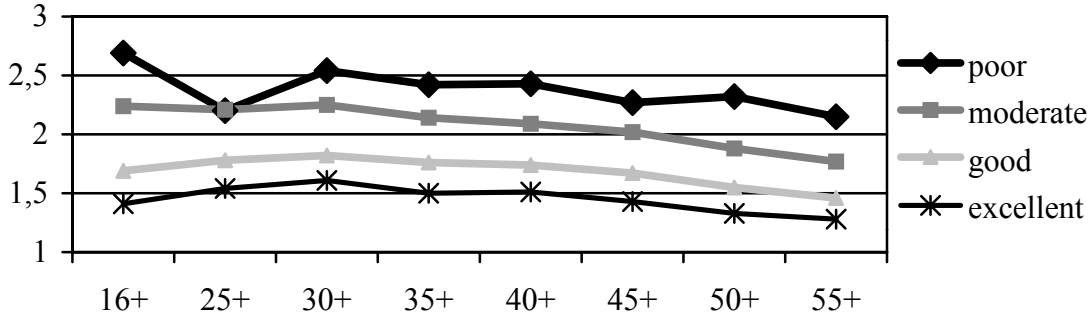
Considering *gender* differences, we have found that in all countries male nurses have higher WAI scores compared with their female counterparts. The overall outcome, that is to say: in case the respondents for all countries are aggregated, is Mann-Whitney U: z =-10.9 (p<.000).

The WAI scores decreases significantly with *age* (Kruskal Wallis: Chi-square 489.3 (df=9), p<.000), although not homogeneously in all countries. In Italy, for example, the decrease with age is less apparent in comparison with other countries.

The intent to leave is two times higher in the group of nurses with low WAI score than in the other group: the relative risk is equal to 2.3 (CI 95%: 2.1-2.5).

The intent to leave for another profession initially increases but shows a decrement after one's thirties, whereas WAI score decreases significantly with age: as a result, the strength of the relationship between WAI and the intent to leave for another profession raises with age (interactive effects: F 17.5 (df= 28) p<.000). This effect has been found in all countries.

Figure 1. Intent to leave for another profession: means comparison by age and WAI. (possible range from 1 (never considering leaving) to 5 (considering it daily), n=34,623)



The intent to leave for another profession also varies according to gender and type of institution (except for Italy and France). The analyses for interaction effects showed different results in the participating countries.

The relationships between work ability on one hand, and variables like the amount of stress due to physical and psychosocial conditions, perceived burnout and perceived health, on the other hand, are significant in all countries. For stress and burnout, we have found, on the whole, a negative relationship with WAI scores (rs=-.36, rs=-.53), while for health perception, the relationship is positive (rs=.59). Moreover, stress and burnout scores are positively related to intent to leave the nursing profession (rs=.20, rs=.23), and negatively to WAI scores (rs=-.17).

Discussion

In a recent study, Costa (2002) has found that nurses appeared to have lower mean scores for work ability compared with both biologist-technicians and physicians in all age groups. Moreover, this effect turned out to be stronger with ageing. While the work ability index predicts the risk of work disability or the future ability to cope and remain at work especially in ageing people (Tuomi et al., 1997), the outcomes regarding our nurses' sample are alarming. Health and the decline in health status and their perceived consequences for managing work have an important role among nurses, in any stage of life.

In the NEXT-Study, the mean WAI scores show significant differences across countries. Besides, factors such as gender, age and type of institution, appear to

play an important role in explaining differences in WAI scores. It might be gender-related differences in muscular mass to partly explain the more favourably outcomes for male respondents in our sample. After all, high physical workloads are very common in the nursing profession, but this hypothesis has to be controlled by lifting aids / hoists usage. Also working conditions reflecting social values attributed to gender such as 'influence at work…' may play an important role (Kiss et al., 2003).

Concerning age effects, mean WAI scores appear to decrease with age, even though individual differentiation increases with age (Ilmarinen 1999). In the light of an enhancement of life-long employability, work ability is an important component. Yet, an increase in work ability enlarges the chance for premature leave too. Without doubt, one should guide the individual work ability and employability, while at the same time the attractiveness of the health care institution has to be monitored in order to guarantee best working conditions, to enhance organizational and professional commitment. Management in health care institutions, taking into account the thoughts of representatives of prevention, should positively influence the working climate, developmental and career opportunities in order to prevent loss of highly capable employees.

The fact that variance in WAI scores is to a large extent explained by stress factors supports the idea that in the long run unsatisfactorily working conditions will result in a negative perception of one's own health and work ability. This negativity might result in a loss of affinity towards the organization as well as to the nursing profession as a whole.

References

Costa G, Sartori A (2002) Aging, working hours and health: some preliminary statistics from the 3rd European Survey on working conditions. In: *The 4th Conference on Ageing and Work. Promotion of Work Ability and Employability*. P 28, Kraków: The Jagiellonian University Medical College.

Ilmarinen J (1999) *Ageing workers in the European Union – Status and promotion of work ability, employability and employment*. Helsinki: Finnish Institute of Occupational Health.

Kiss P, Stordeur S, Verpraet R, De Meester M, Braeckman L, D'Hoore W, NEXT-Study Group (2003) *Work ability and its influencing factors in Belgian Nurses*. Abstract accepted for presentation on the 7th National Symposium on Public Health, to be held in Brussels, Belgium, 5-6 December 2003.

Kloimuller I, Karazman R, Geissler H, Karazman-Morawetz I, Haupt H (2000) The relation of age, work ability index and stress-inducing factors among bus drivers. *International Journal of Industrial Ergonomics* 25(5):497-502.

Tuomi K, Toikkanen J, Backman A-L, Eskelinen L, Ilmarinen J, Järvinen E, Klockars M (1991a) Mortality, disability and changes in occupation among aging municipal employees. *Scand J Work Environ Health* 17(suppl 1):58-66.

Tuomi K, Ilmarinen J, Eskelinen L, Järvinen E, Toikkanen J, Klockars M (1991b) Prevalence and incidence rates of diseases and work ability in different work categories of municipal occupations. *Scand J Work Environ Health* 17(suppl 1):67-74.

Tuomi K, Ilmarinen J, Martikainen R, Aalto L, Klockars M (1997). Aging, work, life-style and work ability among Finnish municipal workers in 1981-1992. *Scand J Work Environ Health* 23(suppl 1):58-65.

Tuomi K, Ilmarinen J, Jahkola A, Katajarinne L, Tulkki A (1998) *Work ability Index (2nd ed.)*. Helsinki: Finnish Institute of Occupational Health.

Tuomi K, Ilmarinen J, Jahkola A, KatajarinneL, Tulkki A (1998). *Work Ability Index. Occupational Health Care.* Helsinki: Finnish Institute of Occupational Health.

Tuomi K, Huuhtanen P, Nykyri E, Ilmarinen J. (2001) Promotion of work ability, the quality of work and retirement. *Occup. Med.* 51(5):318-324.

Van der Heijden BIJM, Thijssen, JGL (2003) HRD and employability' for the special issue entitled 'HRD and employability from different perspectives in the Netherlands and Flanders.' *Editorial note. International Journal of Human Resources Development and Management* 3(2):99-101.