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

Edited by
Hans-Martin Hasselhorn
Peter Tackenberg
Bernd Hans Müller
University of Wuppertal

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

ISSN 1404-790X
SALTSA is a collaboration programme for occupational research in Europe. The National Institute for Working Life in Sweden and the Swedish confederations of trade unions SACO (the Swedish Confederation of Professional Associations), LO (the Swedish Trade Union Confederation) and TCO (the Swedish Confederation of Professional Employees) take part in the programme. Many problems and issues relating to working life are common to most European countries, and the purpose of the programme is to pave the way for joint research on these matters from a European perspective.

It is becoming increasingly obvious that long-term solutions must be based on experience in and research on matters relating to working life. SALTSA conducts problem-oriented research in the areas labour market, employment, organisation of work and work environment and health.

SALTSA collaborates with international research institutes and has close contacts with industry, institutions and organisations in Europe, thus linking its research to practical working conditions.

Contact SALTSA

Labour Market Programme
Lars Magnusson, National Institute for Working Life, Tel: +46 8 619 67 18, e-mail: lars.magnusson@arbetslivsinstitutet.se
Torbjörn Strandberg, LO, Tel: +46 8 796 25 63, e-mail: torbjorn.strandberg@lo.se

Work Organisation Programme
Peter Docherty, National Institute for Working Life, Tel: +46 8 619 69 59, e-mail: peter.docherty@arbetslivsinstitutet.se
Mats Essemyr, TCO, Tel: +46 8 782 92 72, e-mail: mats.essemyr@tco.se

Programme for Work Environment and Health
Per Malmberg, National Institute for Working Life, Tel: +46 8 619 67 10, e-mail: per.malmberg@arbetslivsinstitutet.se
Anders Schaerström, SACO, Tel: +46 8 613 48 74, e-mail: anders.schaerstrom@saco.se

© National Institute for Working Life and authors 2003
SE-113 91 Stockholm, Sweden
Tel: (+46) 8-619 67 00, fax: (+46) 8-656 30 25
Web: www.arbetslivsinstitutet.se/saltsa
Printed at Elanders Gotab
ISSN: 1404-790X
11 Work ability in the nursing profession

Donatella Camerino, Beatrice van der Heijden, Madeleine Estryn-Behar, Philippe Kiss, Janusz Pokorski, Hans-Martin Hasselhorn and the NEXT-Study Group

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), subjective 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.

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

*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
institute 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 ne-
gativity might result in a loss of affinity towards the organization as well as to
the nursing profession as a whole.

References
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.
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-
Abstract accepted for presentation on the 7th National Symposium on Public Health,
to be held in Brussels, Belgium, 5-6 December 2003.
relation of age, work ability index and stress-inducing factors among bus drivers.
M (1991a) Mortality, disability and changes in occupation among aging municipal


