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Satisfactory work ability as a key determinant of clinical nurses' quality of life

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About us

- ❖ Since 1927:
 - Department for Environmental & Occupational Health Andrija Stampar School of Public Health, Medical School University of Zagreb
- ❖ World Health Organization Collaborative Center for Occupational Health
- ❖ BCA WHO activities for workers health focusing on:
 - Stress at work, particularly in health care workers
 - Quality of life
 - Improving work ability
- ❖ 2007. was established *Centre for promotion health at work* as a integral part of the Department with the same issue
- ❖ 2011. Occupational and sports medicine ambulance



Background

- ❖ Important personnel management challenge is to explore factors that stimulate or hinder the development of individual work ability and **quality of life** throughout a career.
- ❖ Quality of healthcare depends on many factors, including health, quality of life and work ability of healthcare workers.
- ❖ The concept of **work ability*** is defined as the ability of a worker to perform his/her job, taking into account:
 - the specific work demands,
 - individual health condition,
 - mental resources,
 - and work life

*Ilmarinen J (2007): The Work Ability Index (WAI). *Occupational Medicine-Oxford* 57, 160-160.

Aim

- ❖ The aim of this study was to examine **quality of life determinants** among **clinical nurses** in Croatia with an emphasis on their **work ability**.
- ❖ An important personnel management challenge is to explore factors that stimulate or hinder the development of individual work ability and quality of life throughout a career.

Design and Methods: setting

- ❖ This study was conducted from October 2007 till May 2008 in six randomly selected hospitals in Croatia:
 - County Hospital Varaždin
 - County Hospital Koprivnica
 - County Hospital Bjelovar
 - Clinical hospital for infectious diseases "Fran Mihaljevi "
 - Special Hospital for Children with Psychomotoric Disorders "Gojak"
 - Psychiatric Hospital "Vrap e"
- ❖ Hospitals were selected from Croatian Registry of Hospitals (CNIPH 2007) using computer software for randomization (MedCalc Software version 10.0).

Design and Methods: ethical considerations

- ❖ The relevant institutional ethics committee approved the current research.
 - the institutional research board at each hospital gave an additional permission to carry out and publish the results of the study
- ❖ Each questionnaire was prefaced with the letter explaining the objectives of the study and assuring the respondents the anonymity and confidentiality of their response.
- ❖ All questionnaires were returned anonymously in sealed non marked envelopes to protect participants' privacy.
- ❖ Participation in the study was voluntary.

Design and Methods: instruments

- ❖ The self-administered questionnaires included:
 - Work Ability Index (WAI) developed by the Finnish Institute of Occupational Health,
 - Quality of Life questionnaire (WHOQL-BREF) developed by the World Health Organization
 - additional socio-demographic questions.
- ❖ The score derived from the WAI ranges from 7 to 49, and it is categorized into one of four categories:
 - poor (7–27 points), moderate (28–36 points), good (37–43 points) and excellent (44–49 points).
- ❖ The WHOQL-BREF is comprised of 26 items evaluating 4 domains: physical health, psychological health, social relationships, and the environmental domain.
 - The scores are transformed on a scale from 0 to 100 to enable comparisons

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Participants

- ❖ A total number of 1212 nurses completed the questionnaires, giving a **response rate of 67.3%**
- ❖ The median (25th–75th percentile) age of all participants was **42 (32–47) years**.
- ❖ **60%** of all participants were under 45 years and **87.5%** were **female**.
- ❖ The median period the participants had been working at the current workplace was **21.0 (12.0–28.0) years**.
- ❖ Furthermore, 15% of all participants completed college education, whereas the remaining **85% completed only secondary school of nursing**.

Results

| Variables | Scores |
|---|---------------------------|
| Work ability score mean ± standard deviation | 38,3 ± 6,1 |
| Quality of life, physical domain median (25 th - 75 th percentile) | 71,4 (60,7 - 78,5) |
| Quality of life, psychological domain median (25 th - 75 th percentile) | 70,8 (58,3 - 79,1) |
| Quality of life, social relationship domain median (25 th - 75 th percentile) | 75,0 (58,3 - 83,3) |
| Quality of life, environmental domain median (25 th - 75 th percentile) | 59,3 (50,0 - 69,7) |

Results

- ❖ **Binary logistic regression** was performed to assess how socio-demographic characteristics and work ability groups predict each of the WHOQL-BREF domains.
- ❖ Having a satisfactory WAI score ($WAI \geq 37$) was significantly the most important predictor for all quality of life domains, with the odds ratios (OR) being as follows:
 - OR=6.8 (95%CI: 4.8-9.6) for the physical domain,
 - OR=2.3 (95%CI: 1.7-3.1) for the psychological domain
 - OR=1.7 (95%CI: 1.3-2.4) for the social relationship domain
 - OR=1.7 (95%CI: 1.3-2.3) for the environmental domain

| | Physical domain | | | Psychological domain | | | Social relationship domain | | | Environmental domain | | |
|---|------------------|-----------|---------|----------------------|-----------|---------|----------------------------|-----------|---------|----------------------|-----------|---------|
| | OR | 95% CI | P | OR | 95% CI | P | OR | 95% CI | P | OR | 95% CI | P |
| Satisfactory Work Ability Index | 6.82 | 4.83-9.63 | <0.001* | 2.26 | 1.69-3.06 | <0.001* | 1.73 | 1.27-2.37 | <0.001* | 1.69 | 1.27-2.25 | <0.001* |
| Age | 1.02 | 0.97-1.09 | 0.496 | 1.02 | 0.96-1.08 | 0.524 | 0.93 | 0.88-0.99 | 0.013* | 1.02 | 0.97-1.07 | 0.481 |
| Higher educational level | 1.92 | 1.10-3.01 | 0.020* | 1.10 | 0.73-1.65 | 0.638 | 0.70 | 0.47-1.05 | 0.032 | 1.51 | 1.01-2.17 | 0.021* |
| Male gender | 2.18 | 1.18-3.95 | 0.012* | 1.05 | 0.68-1.67 | 0.792 | 1.35 | 0.84-2.20 | 0.214 | 1.31 | 0.87-1.95 | 0.150 |
| Advances in professional career | 0.95 | 0.82-1.17 | 0.823 | 0.95 | 0.84-1.14 | 0.776 | 1.07 | 0.91-1.26 | 0.420 | 1.15 | 1.04-1.26 | 0.011* |
| Positive experience in professional life | 1.35 | 1.15-1.56 | <0.001* | 1.44 | 1.25-1.66 | <0.001* | 1.41 | 1.22-1.63 | <0.001* | 1.38 | 1.13-1.65 | <0.001* |
| Satisfaction with present work tasks | 1.22 | 0.86-1.82 | 0.073 | 1.11 | 0.82-1.54 | 0.577 | 1.07 | 0.85-1.30 | 0.625 | 1.01 | 1.01-1.01 | 0.000* |
| Married (or living with a partner) | 0.71 | 0.49-1.11 | 0.149 | 1.21 | 0.88-1.73 | 0.217 | 1.33 | 0.94-1.89 | 0.108 | 0.95 | 0.70-1.29 | 0.734 |
| Working in shifts | 0.90 | 0.65-1.24 | 0.500 | 1.01 | 0.76-1.33 | 0.989 | 0.85 | 0.66-1.17 | 0.354 | 1.15 | 0.92-1.42 | 0.220 |
| Years of practice | 0.97 | 0.91-1.03 | 0.308 | 0.95 | 0.92-1.03 | 0.507 | 1.05 | 0.99-1.11 | 0.083 | 0.95 | 0.91-1.05 | 0.459 |
| Primary workplace: non-surgical departments | 0.80 | 0.57-1.11 | 0.184 | 1.00 | 0.75-1.33 | 0.997 | 1.01 | 0.74-1.38 | 0.974 | 1.21 | 0.95-1.61 | 0.124 |
| Area under the ROC curve (95% CI) | 0.69 (0.71-0.66) | | | 0.69 (0.65-0.73) | | | 0.69 (0.67-0.71) | | | 0.69 (0.66-0.72) | | |

Conclusions

- ❖ Satisfactory work ability was a major quality of life determinant in all WHOQL-BREF domains with the highest odds ratio for the physical domain.
- ❖ The average WAI score was good and has to be, at least, maintained or improved.
- ❖ Our study provides quantified estimates of the extent to which a satisfactory WAI score predicts a better score in physical, psychosocial, social relationships and environmental domain of nurses' quality of life.
- ❖ Maintaining clinical nurses' work ability is an important issue, because it is foundational for the quality of life of the workforce. Therefore, maintaining or improving nurses' work ability remains the essential aim of hospital managers.

