

Psychometric properties of Work Ability Index in the light of comparative survey study

P. Radkiewicz^{a,b,*}, M. Widerszal-Bazyl^a

the NEXT-Study group

^a*Central Institute for Labour Protection–National Research Institute, Department of Ergonomics, Laboratory of Psychology and Sociology of Work, Czerniakowska 16, 00-701 Warsaw, Poland*

^b*Institute for Social Studies, Warsaw University, Poland*

Abstract. This article is focused on psychometric properties of Work Ability Index. The authors have undertaken this task in order to check whether WAI may be considered as a reliable, valid and universal measurement of ability to work in the nursing profession. As an empirical basis authors used the data set obtained from Nurses' Early Exit Study—coming from 10 European countries, an extensive international survey research, conducted on almost 40,000 nurses. As a measure of work ability, WAI may be treated as internally coherent, although one item seems to be meaningless and unnecessary. Additionally, WAI should be considered a very predictive and cross-nationally stable instrument. © 2005 Elsevier B.V. All rights reserved.

Keywords: Work ability; Reliability; Validity; International comparison; Nursing profession

1. Introduction

Work Ability Index (WAI) is determined on the basis of answers to a series of questions. These questions take into account physical and mental demands of work—a worker's health status and resources [1]. As every summative scale, WAI may be examined from the psychometric point of view. Such approach means that reliability and validity, two major properties of a plausible psychometric instrument, must be assured [2]. Looking at essential features of a reliable and valid instrument, one comes to the conclusion that WAI (1) must be

* Corresponding author. Central Institute for Labour ProtectionNational Research Institute, Department of Ergonomics, Laboratory of Psychology and Sociology of Work, Czerniakowska 16, 00-701 Warsaw, Poland. Tel.: +48 22 6233284; fax: +48 22 6233282.

E-mail address: pirad@ciop.pl (P. Radkiewicz).

internally coherent, in order to measure well what it really measures; (2) in consequence of previous condition, it should not include positions which systematically weaken its internal reliability; (3) assuming to be one dimensional scale, it should be encompassing phenomenon which is as much homogeneous as possible; (4) as a measure of how well a worker is able to perform his or her work, it should be related to measures of physical and mental health (see content of WAI); and (5) it should be a universal instrument, free of cultural or national context.

2. Data and methods

The authors used data gathered in a frame of Nurses Early Exit Study, funded by the European Commission (QLK6-CT-2001-00475). The study embraced over 38,000 nurses from 10 European countries: Belgium, Germany, Finland, France, Italy, Norway, Netherlands, Great Britain (excluded from these analyses), Poland, and Slovakia. All national samples were drawn from representative sets of health care units [3]. The study was based on interview and questionnaire methods. Work ability was measured by seven-item WAI questionnaire [1]. For correlational analyses, three instruments were used: emotional burnout coming from Copenhagen Burnout Inventory [4]; General Health Index constructed by Ware and Sherbourne [5]; and van Korff disability index [6].

3. Results

3.1. Internal reliability

In the first step of analyses, internal reliability of WAI was checked—in total sample and by country. For this purpose, Cronbach's alpha was applied as the most popular and widely used measure. Alpha coefficients which may range from 0 to 1 (perfect reliability) are presented in Fig. 1.

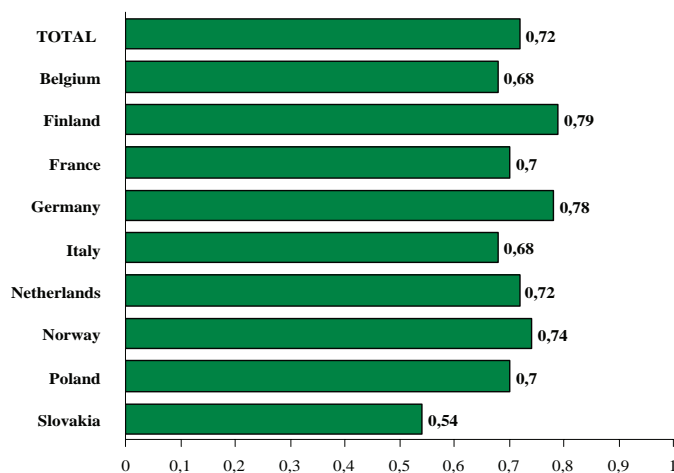


Fig. 1. Cronbach's alpha in the total sample and by countries.

Download English Version:

<https://daneshyari.com/en/article/9021319>

Download Persian Version:

<https://daneshyari.com/article/9021319>

[Daneshyari.com](https://daneshyari.com)