

Healthy Work in an Ageing Europe

Strategies and Instruments for Prolonging Working Life

Martina Morschhäuser
Reinhold Sochert



European Network for
Workplace Health Promotion



1.3 Work Ability Index (WAI)

The Work Ability Index is a tool to record the work ability of employees. It originated in Finland and was developed as part of a research project (cf. Tuomi et al. 1995). It aims at identifying at an early stage health risks of the employees and risks of early retirement and counteracting them.

This tool also involves a questionnaire which serves to conduct a self-assessment. However, the focus here is not on the labour and HR policy but on the employees and their work ability assessed by themselves. Proceeding from the assessments of the employees, an examination is made as to whether restrictions on their work ability are imminent in the future and what need for action there is in order to promote the health of those surveyed over their working lives.

The questions are aimed at:

- the estimated current and future work ability;
- diagnosed illnesses and the number of absenteeism days in the previous year;
- the estimated sickness-related deterioration in the work performance;
- mental ability reserves.

The questionnaire can be completed by the employees themselves. However, the questions can also be answered with the help of others, for example works physicians during the works medical examination. In this case the works physician should use the WAI to discuss questions of health and staying healthy with the employees. They should consider together what the employees can do themselves and what the company can do to maintain and promote their work ability.

The WAI can be used for individual employees and groups of workers. However, it can also be applied as an analysis tool to the whole company or the whole workforce of a company. It offers the possibility of comparing individual departments or company sections as well as individual groups of employees and age groups according to their WAI values. In this way it becomes apparent for which employees or groups of workers occupational medical care is necessary. And company sections where health-oriented interventions should be given top priority can be determined.

Repeated use of the WAI provides information on how the work ability of those surveyed has developed and whether action taken to promote health has impacted on the employees involved.

The WAI has been used and tested on many occasions. Averages are available which were achieved with the WAI as reference figures, both for different occupational groups and age classes. These permit a comparison of the data obtained from many companies with those gained in one company. According to the results of an 11-year continuous Finnish study, the WAI has exhibited a high predictability for general disablement and mortality (Ilmarinen/Tempel 2003).

This tool is easy to use. The time involved for the questionnaire is between 10 and 15 minutes; 3 to 5 minutes are needed to evaluate each questionnaire.

As the WAI surveys sensitive data about illnesses and the estimated work ability of the employees, it is imperative that participation is voluntary. At the same time, it should not be used without the consent of the workers' representatives. Data protection must be strictly observed.

Work Ability Index

1. Current work ability compared with the lifetime best

Assume that your work ability at its best has a value of 10 points.
How many points would you give your current work ability?
(0 means that you cannot currently work at all)



2. Work ability in relation to the demands of the job

How do you rate your current work ability with respect to the **physical** demands of your work?

very good	5
rather good	4
amoderate	3
rather poor	2
very poor	1

How do you rate your current work ability with respect to the **mental** demands of your work?

very good	5
rather good	4
amoderate	3
rather poor	2
very poor	1

3. Number of current diseases diagnosed by a physician

In the following list, mark your diseases or injuries. Also indicate whether a physician has diagnosed or treated these diseases. For each disease, therefore, there can be 2, 1, or no alternatives circled.

	Yes, own opinion	Yes, physician's diagnosis
Injury from accidents		
01 back	2	1
02 arm/hand	2	1
03 leg/foot	2	1
04 other part of body, where and what kind of of injury?	2	1
...		
Musculoskeletal disease		
05 disorder of the upper back or cervical spine, repeated instances of pain	2	1
06 disorder of the lower back, repeated instances of pain	2	1
07 (sciatica) pain radiating from the back into the leg	2	1
08 Musculoskeletal disorder affecting the limbs (hands, feet), repeated instances of pain	2	1
09 rheumatoid arthritis	2	1
10 other musculoskeletal disorder, what?	2	1
...		

		Yes, own opinion	Yes, physician's diagnosis
Cardiovascular diseases			
11	hypertension (high blood pressure)	2	1
12	Coronary heart disease, chest pains during exercise (angina pectoris)	2	1
13	coronary thrombosis, myocardial infarction	2	1
14.	cardiac insufficiency	2	1
15	other cardiovascular disease, what?	2	1
...			
Respiratory disease			
16	repeated infections of the respiratory tract (also tonsillitis, acute sinusitis, acute bronchitis)	2	1
17	chronic bronchitis	2	1
18	chronic sinusitis	2	1
19	bronchial asthma	2	1
20	emphysema	2	1
21	pulmonary tuberculosis	2	1
22	other respiratory disease, what	2	1
...			
Mental disorder			
23	mental disease or severe mental health problem (for example, severe depression, mental disturbance)	2	1
24	slight mental disorder or problem (for example, slight depression, tension, anxiety, insomnia)	2	1
Neurological and sensory disease			
25	problems or injury to hearing	2	1
26	visual disease or injury (other than refractive error)	2	1
27	neurological disease (for example stroke, neuralgia, migraine, epilepsy)	2	1
28	other neurological or sensory disease, what?	2	1
...			
Digestive disease			
29	gall stones or disease	2	1
30	liver or pancreatic disease	2	1
31	gastric or duodenal ulcer	2	1
32	gastritis or duodenal irritation	2	1
33	colonic irritation, colitis	2	1
34	other digestive disease, what?	2	1
...			

	Yes, own opinion	Yes, physician's diagnosis
Genitourinary disease		
35 urinary tract infection	2	1
36 kidney disease	2	1
37 genitals disease (for example fallopian tube infection in women or prostatic infection in men)	2	1
38 Other genitourinary disease, what?	2	1
...		
Skin diseases		
39 allergic rash, eczema	2	1
40 other rash, what	2	1
...		
41 other skin disease, what?	2	1
...		
Tumour		
42 benign tumour	2	1
43 malignant tumour (cancer), where?	2	1
...		
Endocrine and metabolic diseases		
44 obesity	2	1
45 diabetes	2	1
46 goiter or others thyroid disease	2	1
47 other endocrine or metabolic disease, what?	2	1
...		
Blood diseases		
48 anemia	2	1
49 other blood disorder, what?	2	1
...		
Birth defects		
50 birth defect, what?	2	1
...		
Other disorder or disease		
51 What?	2	1
...		

4. Estimated work impairment due to diseases

Is your illness or injury a hindrance to your current job?

Circle more than one alternative if needed.

There is no hindrance/I have no diseases	6
I am able to do my job, but it causes some symptoms	5
I must sometimes slow down my work pace or change my work methods	4
I must often slow down my work pace or change my work methods	3
Because of my disease, I feel I am able to do only part-time work	2
In my opinion, I am entirely unable to work	1

5. Sick leave during the past year (12 months)

How many whole days have you been off work because of a health problem (disease or health care or for examination) during the past year (12 months)?

none at all	5
at the most 9 days	4
10 - 24 days	3
25 - 99 days	2
100 - 365 days	1

6. Own prognosis of work ability two years from now

Do you believe that – from the standpoint of your health – you will be able to do your current job **two years from now**?

unlikely	1
no certain	4
relatively certain	7

7. Mental resources

Have you recently been able to enjoy your regular daily activities?

often	4
rather often	3
sometimes	2
rather seldom	1
never	0

Have you recently been active and alert?

often	4
rather often	3
sometimes	2
rather seldom	1
never	0

Have you recently felt yourself to be full of hope for the future?

continuously	4
rather often	3
sometimes	2
rather seldom	1
never	0

Informed consent (promotion an maintenance of work ability in general)

Do you consent to let a summary of the preceding data and the score of your work ability index be included in your health records?

- Yes
- No

signature

How to evaluate

Completion of the questionnaire results in a figure or score which lies between 7 and 49. The figure describes the current work ability of the respondents and, at the same time, permits forecasts to be made of the health risk. A high value indicates a good work ability, a lower value an unsatisfactory or jeopardised work ability. Depending on the level of the figure, it is recommended either to maintain, support, improve or reinstate the work ability. Information on how to process and evaluate the questionnaire can be found in a brochure published by the Federal Institute of Occupational Safety and Health (vgl. Tuomi et al 1996).

Result	Category	Work ability action
2 – 27	“poor”	Reinstate work ability
28 – 36	“medium”	Improve work ability
37 – 43	“good”	Support work ability
44 – 49	“very good”	Maintain work ability

Source: Brochure of the project „Arbeitsfähigkeit 2010 – Was können wir tun, damit Sie gesund bleiben?“ (www.gesuender-arbeiten.de)

It must be noted when interpreting the results that the estimated work ability relates to the work performed by the employees with their respective physical and mental work demands. A store man with a low index who performs physically hard work and feels impaired owing to his back pains can nonetheless be very capable of meeting more cognitive demands in an office job. To this extent low WAI values do not indicate an individual deficiency but an incongruity between the work demands and the work capability of the employees.

Further notes

At the initiative of the Federal Institute for Occupational Safety and Health, a WAI network is currently being established in Germany (see www.arbeitsfaehigkeit.net). This network sees itself as a platform for active and potential users of this tool. On this website experience with the use of this tool is to be shared and a database created. The website also offers more information on the WAI and notes on its use.

Moreover, the Federal Institute for Occupational Safety and Health is currently preparing a short version of the above questionnaire. In this version individual illnesses will be questioned in less detail in the form of illness groups. The publication of this questionnaire and a new brochure “WAI Brochure” with the long version is planned for the first half of 2007.