

BIROn - Birkbeck Institutional Research Online

Teoh, Kevin and Mcdowall, Almuth and Doyle, Nancy and Kwiatkowski, R. and Kurz, R. and Kinman, Gail (2025) Guidelines on the use of psychometric assessments in occupational health. Occupational Medicine , ISSN 0962-7480. (In Press)

Downloaded from: <https://eprints.bbk.ac.uk/id/eprint/55947/>

Usage Guidelines:

Please refer to usage guidelines at <https://eprints.bbk.ac.uk/policies.html> or alternatively contact lib-eprints@bbk.ac.uk.

Guidelines on the Use of Psychometric Assessments in Occupational Health

Teaser text

Psychometric assessments provide objective insights into how people differ in various ways, including the measurement of health outcomes, symptoms and behaviours. Used effectively, they can support occupational health professionals in decision-making and intervention planning. This article summarises a recently published guide (1) that outlines best practices for the selection, administration, and interpretation of psychometric assessments while addressing ethical considerations and challenges.

Key Learning Points

What is known about this subject

- Psychometric assessments are widely used in occupational health to evaluate mental health, cognitive functioning, and work-related stressors.
- Their effectiveness depends on reliability, validity, and appropriate application
- Misuse or misinterpretation can lead to unfair workplace decisions and employee distrust.

What this guideline adds

- Provides clear guidance on selecting, administering, and interpreting psychometric assessments in occupational health.
- Highlights ethical considerations, including confidentiality, fairness, and informed consent.
- Emphasises the integration of psychometric assessments into broader workplace health strategies.

What impact this may have on practice, policy, and procedure

- Encourages the responsible and ethical use of psychometric assessments in workplace health management.
- Supports occupational health practitioners in commissioning, understanding and interpreting psychometric assessments in their practice.

Introduction

Psychometric assessments are increasingly used in occupational health (OH) to support decision-making, evaluate workplace and individual risk factors, and improve employee well-being. These assessments provide an objective and standardised approach to evaluating individual characteristics (e.g., personality), symptoms (e.g., stress or burnout) or preferences and behaviours (e.g., frequency of exercise). However, their effectiveness depends on their appropriate selection, administration, and interpretation.

This article provides an overview of a recent guide published on the use of psychometric assessments in OH (1), which outlines key points for practitioners on what psychometric assessments are, the different types of psychometric assessments, and the training and competence required to administer them. It also covers how to evaluate psychometric assessments, including the importance validity and reliability, as well as key tips on the appropriate use of such assessments.

What are psychometric assessments?

Psychometric assessments – also known as tests, measures, tools, instruments, or questionnaires – provide an objective and standardised way to measure individual traits, abilities, attitudes and characteristics in symptoms and behaviours. They should be rigorously developed according to best practice standards, and administered, scored, and interpreted in a standardised way.

Psychometrics have four defining features:

- *They must be reliable.* This means they should provide consistent and accurate results across different situations and contexts.
- *They must be valid,* so they must measure what they claim to measure. The content of the psychometric must align with the specific characteristic being evaluated.
- *They must be as free from bias as possible.* A good assessment should provide accurate results for everyone, regardless of age, gender identity, or background. While this can be challenging due to differences in experiences, languages and cultural backgrounds, well developed tests aim to minimise bias.

- *They should be standardised.* This means there must be a clear protocol for administering the assessment, ensuring that everyone is treated fairly and has a consistent experience.

When using psychometric assessments, it is important to know that any measurement of human characteristics will never be 100% accurate and should be viewed as a ‘best estimation’. Therefore, it is strongly recommended that psychometric assessments be used as part of a broader process, including, for example, clinical interview or observations, and caution is needed when relying on a single assessment to draw definitive conclusions. It is essential that what is being assessed is made clear from the start, and that the chosen psychometric assessment matches the intended focus of the assessment. For example, wellbeing is a broad concept that encompasses various dimensions of a person’s mental, emotional and social health, with different tools targeting specific aspects. It must therefore be clearly defined to ensure accurate measurement – depending on the context, a measure of overall wellbeing (e.g., the General Health Questionnaire) may be more suitable than a burnout-specific measure.

Where psychometric assessments are used in occupational health

The guide provides examples of psychometric assessments across the following areas:

- *Physical health*, including symptoms related to musculoskeletal issues; breathlessness during daily activities; noise-induced hearing loss; occupational dermatology; and pain.
- *Mental health*, including symptoms of depression; anxiety; burnout; psychological distress; and wellbeing.
- *Health behaviours*, including fatigue; insomnia; sleep quality; alcohol use; and physical activity.
- *Work-related stress / psychosocial risk assessments*, including aspects of the psychosocial working environment.

- *Neurodiversity*, which is a challenging and complex area due to the limitations of many screening tools for providing differential diagnoses.
- *Developmental and cognitive functions*, assessing and supporting workers following traumatic brain injury, or stroke, possible cognitive decline in older workers, or for assessing neurodiversity functioning (e.g., attention, memory).
- *General functioning*, including physical functioning of workers; overall health status in relation to workability (e.g., the general ability to function at work).

As with all psychometric assessments, it is crucial that the assessments used are both valid and reliable, relevant to the assessment context, and administered by an appropriately qualified practitioner. Diagnosing specific health conditions, such as depression and chronic pain, often requires additional expertise and the use of more than one measure. Furthermore, the purpose of a particular measure may be limited; for example, it might indicate a potential issue but not identify the underlying cause or associated risk factors.

How to understand the basis of psychometrics

To assess the quality of a psychometric assessment effectively, it is important to understand its reliability and validity, which are the foundation of any psychometric assessment.

Reliability refers to how consistent a specific measure is. The results obtained should be consistent over time, so that stable characteristics should obtain similar scores when measured at different time points. A reliable assessment should also be independent of the assessor, meaning that that results should be consistent regardless of who administers it. To be reliable, an assessment should also have item consistency, where different items related to a similar construct should obtain similar results or responses. For example, someone experiencing insomnia would likely score consistently highly on a measure of sleep dysfunction.

Validity asks whether a particular assessment is measuring what it claims to be measuring. For example, a measure of the psychosocial work environment should be asking questions about how work is organised, designed and managed, rather than on health outcomes or general wellbeing

There are different ways to assess validity, each examining different aspects of how well the assessment meets its intended purpose:

- *Construct validity*: Does the test measure what it says it does?
- *Criterion-based validity*: Do assessment results relate to other information, such as job performance or health data?
- *Face and faith validity*: Does the assessment make sense and appear credible to people who are taking and using it? Do people trust the assessment and its results?
- *Consequential validity*: What are the wider effects of using the assessment (intended and unintended)?

The guide provides details on where to find information related to a particular assessment's reliability and validity.

It is also important to understand how *bias* can influence the assessment process. Factors such as honesty, stigma, fear, privacy, or desire for a particular outcome can affect how a person may respond to a test. Additionally, instructions and tests may be more easily understood by people with specific educational backgrounds or language skills. To promote fairness and equity, it is important to provide everyone with adequate time and opportunities to practice. Seeking specialist advice on this issue is highly recommended, as legal requirements also need to be considered, (e.g., to prevent claims of discrimination).

Training and competence

Each psychometric measure should provide guidance on its use and administration process, as well as the scoring procedure. There may also be additional requirement or restrictions on who is able to use it, such as:

- Being on the Register of Qualifications in Test Use, which is a qualification from the British Psychological Society that covers the fundamentals of psychometric testing and scoring. Registered members agree to adhere to the Code of Good Practice in Psychological Testing and to maintain their competence in testing.
- Being a relevant practitioner, Chartered Psychologist or clinically qualified.
- A relevant educational qualification.

- Undergoing specialised training in the assessment being used.

It is always important to adhere the administration instructions, recognise one's professional responsibilities to work within the limits of one's knowledge and skills, and also keep in mind the limitations of self-report measures.

Tips on using psychometrics

The guide offers the following tips to support the better use of psychometric assessments:

- Clarify the purpose of the assessment so that it is clear what the assessment is intended to measure and how it will be used.
- Consider the available evidence in the academic literature, shared by test publishers, and / or from test reviews published by reputable organisations (e.g., the British Psychological Society).
- Work with people who are on the Register of Qualifications in Test Use, who are users awarded qualifications in occupational, educational, and forensic test use by the British Psychological Society.
- Question developers and test publishers on how and why the assessment will be suitable for your organisation and the intended use.
- Follow the assessment guidance so that assessments are administered and scored consistently according to the provided instructions.
- Be mindful of using assessments without critically evaluating their actual effectiveness or suitability because they are popular or endorsed by well-known organisations or individuals.
- Evaluate the process to assess whether the test achieved its intended goals and what any corresponding impacts might be.

Conclusion

Psychometric assessments play a valuable role in OH by providing standardised insights that are vital in supporting employee health and wellbeing. However, their effectiveness depends on careful selection, ethical administration, and expert interpretation. The developed guide supports OH professional to better understand this all. This is important as when not used

appropriately, there is potential to inaccurately estimate the health risk of people, spending resources that could be better used in other ways or labelling someone with characteristics that are not psychologically valid (e.g., labelling someone as a ‘poor’ worker because they have low workability scores, or that someone is ‘emotionally unwell’ because they score high on neuroticism). OH professionals must ensure that assessments are used fairly, transparently, and as part of a broader workplace health strategy. By adhering to best practices, psychometric assessments can support healthier work environments and better outcomes for employees and organisations alike.

Declaration of potential conflict of interest

[anonymised] is a major shareholder of the non-profit company [anonymised], owner of a commercial product, [anonymised], which measures self-efficacy in the functional performance of skills which can be affected by health conditions.

[anonymised] is a senior leader at [anonymised], owner of a commercial product, [anonymised], which assesses personality, ability and competency dimensions that underpin performance and affect (including wellbeing) at work.

References

1. Teoh, K., McDowall, A., Kinman, G., Doyle, N., Kwiatkowski, R., & Kurz, R. (2025). Psychometric assessments in occupational health: what they are and how to use them. Society of Occupational Medicine.