



Psychometric Foundations of the GLWS

Introduction

The Global Leadership Wellbeing Survey (GLWS) was developed to measure multidimensional experiences of wellbeing among leaders and professionals. This paper summarises the empirical foundations of the GLWS by drawing on:

- An independent psychometric analysis by the University of Melbourne's Centre for Wellbeing Science (n = 6,565)
- A series of external validation studies (~650 leaders)
- Normative datasets accumulated from 2016–2022
- Statistical evidence across reliability, validity, and factor structure

The purpose of this paper is to consolidate the scientific evidence underpinning the GLWS into a short, freely accessible document that demonstrates its robustness as a reliable and valid measure. This paper does not represent the full extent or details of the psychometric properties of the GLWS.

Conceptual Foundations

The GLWS model, survey and report output is built on two interconnected domains:

Working Well (6 scales) and **Living Well** (6 scales)

This holistic approach rests on the premise that considering wellbeing at work is insufficient and to consider it in isolation from wellbeing outside work represents a false picture. Four core questions have guided the empirical testing of GLWS:

1. *Is a combined Working + Living model statistically justified?*
2. *Is the six-scale structure valid?*
3. *Are items reliable and psychometrically sound?*
4. *Does GLWS accurately measure what it intends to measure?*

Norms and Scoring

Criterion-Referenced Approach

The GLWS deliberately avoids traditional norm-referenced scoring. Wellbeing, unlike ability or personality, is subjective and dynamic. Social comparisons distort reality — especially in high-pressure environments where poor wellbeing can unfortunately be the norm. Instead, the GLWS uses criterion-referenced thresholds anchored to definitions of thriving (e.g., sleep recommendations, recovery patterns, wellbeing science anchors).

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Normative Data

When normative data is required (e.g., for organisational monitoring), the GLWS provides percentiles from a large dataset of $n = 6,565+$ executives, managers and senior professionals. Percentile tables for Working Well and Living Well scales are available in the Technical Manual, with the caveat that they should not be used for individual-level interpretation.

Reliability Evidence

The Nature of Wellbeing as a Psychological Construct

Wellbeing is not expected to be stable over time. Test-retest reliability — appropriate for stable traits — is not appropriate for dynamic states.

Internal Consistency

The GLWS demonstrates strong internal consistency within all scales showing Cronbach alphas (split-half equivalent) of 0.74–0.88 across all scales. This falls well within the recommended range (.70–.90) and indicates:

- Items within each scale are measuring an aspect of the same construct
- There is no concern about redundancy or excessive overlap
- Scales are sufficiently distinct to contribute unique information

Reliability Summary

GLWS meets or exceeds professional guidelines (APA/AERA/EFPA) for internal consistency for wellbeing-type measures.

Factor Structure

The factor structure of the GLWS was assessed using exploratory and confirmatory factor analysis that shows:

- The six-factor model is empirically supported
- Scale items cluster in line with the conceptual framework
- Working and Living domains show expected higher-order relationships

Details of these analyses form part of the GLWS Technical Manual, available for review upon request.

Construct Validity (Internal Validity)

Intercorrelations Within Domains

The GLWS scales show conceptually coherent relationships with Working Well intercorrelations ranging between .36–.74 and Living Well intercorrelations of between .52–.75. These reflect meaningful connections among wellbeing constructs, no concerning redundancy (no correlations > .80) and clear discriminant boundaries between dimensions

Cross-Domain Relationships

Cross-domain correlations (of between .47–.75) show that Working Well and Living Well are connected but non-identical and support the holistic framework.

External Validity

An external validation study (~650 leaders) compared GLWS scores with three established measures:

PERMAH Profiler (Butler & Kern, 2016)

Correlations fall in the ideal range for convergent validity (0.30–0.70):

- Positive Emotion ↔ GLWS Resilience & Equanimity .61
- Engagement ↔ GLWS Intellectual Flow & Engagement .49
- Meaning ↔ GLWS Purpose & Meaning .58
- Relationships ↔ GLWS Authentic Relationships .45
- Health ↔ GLWS Vitality & Energy .48

WEMWBS (Tennant et al., 2007)

Correlations follow the expected pattern of strong convergence with overall wellbeing.

Maslach Burnout Inventory (Maslach et al., 1997)

Burnout correlations follow an inverse logic:

- Exhaustion ↔ GLWS Working Well scales ranging between $-.33$ to $-.69$
- Cynicism ↔ GLWS Working Well scales ranging between $-.33$ to $-.69$
- Personal Efficacy ↔ GLWS Working Well scales ranging between $+.24$ to $+.52$

Patterns for Living Well are similar but slightly weaker, in line with expectations and previous research. These results strongly affirm GLWS's construct and criterion validity.

Incremental Validity

GLWS adds predictive value beyond established measures of burnout.

Combining all six GWS Working Well scales explains:

- 52% Exhaustion
- 50% Cynicism
- 39% Personal Efficacy

This level of explanatory power is unusually high for occupational psychometrics and signals GLWS's utility as a proactive risk-mitigation tool.

Ethical, Accreditation and Professional Standards

The GLWS team is completing a full Technical Manual in pursuit of British Psychological Society (BPS) test registration approval. GLWS is already approved by the International Coaching Federation (ICF) and Association of Coaching, globally for 12 CCE units.

The GLWS has been the subject of invited sessions at the International Congress of Psychology, the European Association of Work & Organizational Psychology Congress, the British Psychological Society Occupational Psychology Annual Conference, the Australian Psychological Society Annual Conference, the Australian Organisational Psychology Annual Conference, and several other leading academic and practitioner conferences.

These recognitions reinforce GLWS's standing as a professional-grade psychometric tool.

Limitations and Future Directions

- The wellbeing domain is dynamic; the aim of longitudinal validation remains.
- Factor analytic details are elaborated in the Technical Manual.
- Further study is recommended across industries, cultures, and geographies.
- Living Well “Intellectual Engagement & Flow” norms are not yet available.

Conclusion

GLWS demonstrates high-quality psychometric properties across reliability, validity, factor structure and predictive utility. It stands out in the wellbeing measurement landscape due to its holistic dual-domain model, robust internal consistency, clear convergent and discriminant validity, strong predictive relationships with burnout, thoughtful criterion-referenced scoring, academic independence and rigour.