



Validity evidence for the Indonesian version of the Flourishing Index among individuals with chronic disease

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Abstract: Flourishing is a multidimensional indicator of positive functioning that may be particularly relevant for individuals living with chronic conditions, whose well-being is shaped by psychological, physical, social, and material demands. This study evaluates the validity evidence supporting the interpretation of scores from the Indonesian version of the Flourishing Index (FI) in this population. A total of 272 adults with chronic conditions participated in the field study. Following the Standards for Educational and Psychological Testing, evidence was gathered from three sources: test content, response processes and internal structure. Content evidence was examined based on the judgment of three experts, with all items obtaining an I-CVI of 1.00. Response-process evidence was examined through cognitive interviews (N = 5). The original 0-10 response format was modified to a 1-5 one to align the response options with the needs and context of our study, while retaining the original item content. Internal-structure evidence was examined using confirmatory factor analysis of the six-domain model in jamovi version 2.4 with maximum likelihood estimation. All 12 items showed standardized loadings above .50. Model fit was generally acceptable, at $\chi^2(39) = 74.10$, $p < .001$, RMSEA = .057, CFI = .977, TLI = .961, and SRMR = .034, while McDonald's omega for the total scale was .866. Composite reliability was acceptable for five domains, but the character and virtue domain showed weaker reliability and convergent evidence. Taken together, the findings support interpretation of the Indonesian FI scores for research and supportive well-being assessment among adults with chronic conditions, with further replication warranted.

Keywords: chronic disease; confirmatory factor analysis; flourishing; Indonesia

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Introduction

Chronic conditions influence health through interacting biological, psychological, and social processes. Positive mental health may therefore serve as an important resource for individuals managing recurring symptoms, prolonged treatment, and changes in daily functioning (Engel, 1977; Huangfu, 2020; Keyes, 2005). Chronic psychological stress can also contribute to inflammatory processes and disease progression, illustrating why psychological functioning should be considered alongside biomedical management (Cohen et al., 2012). In this context, flourishing matters not because it replaces clinical outcomes, but because it captures positive functioning that may coexist with chronic illness and support adaptation to long-term health demands.

Chronic diseases include conditions that persist over time, require continuing management, and may restrict everyday functioning (Centers for Disease Control and Prevention, 2026). In Indonesia, the burden of non-communicable and other long-term conditions further strengthens the need for psychological measures that can characterize well-being in addition to symptoms and impairment (Rina, Surjaningrum, & Syaharani, 2024; Rusyda, 2025; WHO, 2018). Because chronic illness can affect emotional functioning, social roles, physical capacity, and material stability, evaluating flourishing may provide clinically and scientifically relevant information about how individuals function across several life domains (Bourdeau et al., 2024; Engel, 1977; Taylor, 2006).

Flourishing refers to effective functioning across multiple life domains, rather than merely experiencing positive affect (Grenville-Cleave et al., 2021; Hone et al., 2014; Huppert & So, 2013; Rule et al., 2024). Seligman (2011) conceptualized flourishing through positive psychological functioning, while VanderWeele (2017) broadened the construct to include happiness and

life satisfaction, physical and mental health, meaning and purpose, character and virtue, close social relationships, and financial and material stability. In health contexts, flourishing also concerns the capacity to pursue meaningful goals, maintain positive functioning, and live adaptively alongside illness (Edgar & Pattison, 2016). Empirical research has linked positive well-being and flourishing-related resources with health behavior, social functioning, and adaptation in chronic illness populations (Piotrowski, 2010; Schmidt-Sane et al., 2023; Strine et al., 2008).

Several well-being instruments are already used internationally and in Indonesia, including the Flourishing Scale (Diener et al., 2010), the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999), and the PERMA (Positive emotion, Engagement, Relationship, Meaning, and Accomplishment) framework (Seligman, 2011). These measures are valuable for assessing psychological well-being, but they do not all explicitly integrate physical health and material security into a single score. For people living with chronic conditions, these domains may be especially relevant because well-being is affected simultaneously by symptoms, treatment demands, social relationships, and financial pressures. It creates a rationale for evaluating the Flourishing Index (FI) in an Indonesian chronic-illness context rather than assuming that evidence from general populations is directly transferable.

The FI developed by VanderWeele (2017) consists of six domains: happiness and life satisfaction, physical and mental health, meaning and purpose, character and virtue, close social relationships, and financial and material stability. Previous studies have reported encouraging reliability of the FI and its use in populations with multiple chronic conditions, during the COVID-19 pandemic, and among health professionals (Faul et al., 2019; Kelly-Hedrick et al., 2020; Tani et al., 2023). Population-based validation work has also examined versions of the FI in other cultural

settings (Sattler et al., 2023). Nevertheless, evidence from other languages, cultures, and populations cannot, by itself, establish that Indonesian scores from individuals with chronic conditions can be interpreted the same way.

Despite the growing literature on human flourishing and the increasing use of the FI across different populations and cultural settings, an important measurement gap remains. Previous studies have provided psychometric evidence for the index in cross-cultural populations and workplace settings (Weziak-Bialowolska et al., 2019a, 2019b), while Sattler et al. (2023) demonstrated the validity of a German version of the FI in a population-based sample. These studies support the index's usefulness for assessing multidimensional flourishing across contexts. Still, evidence from other populations, cultures, and languages cannot automatically support equivalent interpretations of FI scores among Indonesian adults living with chronic conditions. This distinction matters because flourishing in the context of chronic illness may be shaped by interactions among physical health, psychological well-being, social relationships, and broader structural conditions (Grenville-Cleave et al., 2021; Schmidt-Sane et al., 2023). Within the Indonesian psychological literature, flourishing and related positive well-being constructs have been examined in diverse contexts, including Indonesian families (Afiatin et al., 2023), hospitalized individuals with schizophrenia (Fathinah et al., 2023), adolescents living in orphanages (Megawati et al., 2019), and job seekers (Sulaiman et al., 2023). However, these studies have not established validity evidence for an Indonesian adaptation of the FI, specifically among adults with chronic conditions.

This study addresses this population- and context-specific measurement gap. First, it provides validity evidence for the Indonesian version of the FI among adults living with chronic conditions in the country. Second, rather than

relying solely on evidence of internal structure, the study integrates evidence from test content, response processes, and internal structure in accordance with contemporary validity standards (AERA et al., 2014). Third, it empirically examines a context-sensitive modification of the original response continuum from 0–10 to 1–5, informed by the response-process evaluation, while explicitly acknowledging the implications of this modification for comparability with the original response format.

Therefore, the study's contribution extends beyond translating or applying an existing measure: it establishes an evidence-based validity argument for interpreting FI scores in a specific Indonesian chronic-health context. This population-specific and context-sensitive validity evidence may provide a methodological basis for future research examining flourishing among Indonesian populations living with chronic conditions.

The study therefore aims to evaluate whether the Indonesian version of the FI provides sufficient validity evidence to support interpretation of its scores among individuals with chronic conditions in Indonesia. By integrating evidence from expert reviews, response-process evaluation, and confirmatory factor analysis, the study seeks to determine both the strengths of the adapted measure and the aspects that require further psychometric refinement.

Methods

Participants

Ethical approval was obtained from Universitas Airlangga (No. 762/B/UN3.FPSI/III/TA.00.03/2025). Participants were recruited through chronic-disease communities in Indonesia. The eligibility criteria were that the participants were adults; were suffering from a chronic condition diagnosed by a health professional; and had completed all the FI items. A

total of 272 participants were included in the final field analysis. The sample comprised 225 women (84%) and 47 men (16%); 78 participants (28%) were aged 18-29, and 194 (72%) were aged 30-40. The sample included autoimmune and non-autoimmune chronic conditions; Table 1 presents the full diagnostic distribution.

Research Instrument

The scale used was VanderWeele's Flourishing Index (2017), which accounts for physical and mental health aspects. This scale is generally available in Indonesian which can be accessed at the following page: <https://www.cos.io/gfs-resources>. The FI has 12 items that represent six main aspects: positive feelings and life satisfaction; physical and mental health conditions; meaning and purpose; virtue character; close relationships; and material stability. A detailed breakdown of the instrument's structure and item distribution is presented in Table 2.

Procedures

The psychometric evaluation followed the Standards for Educational and Psychological Testing (AERA et al., 2014). Validity was treated as an evidence-based argument concerning interpretation and use of scores, rather than as an inherent property of the instrument. Three sources of evidence were examined sequentially: test content, response processes, and internal structure.

First, evidence based on test content was obtained through structured expert judgment involving three experts with backgrounds in psychology, psychometrics, and psychological measurement. The experts evaluated the relevance, clarity, and representativeness of the 12 items using a 4-point rating scale (1 = poor to 4 = very good) (Yaghmaei, 2003).

The expert ratings were summarized using the item-level content validity index (I-CVI)

following Lynn (1986) and Polit and Beck (2006). Ratings of 3 or 4 were treated as evidence of content relevance. All 12 items obtained an I-CVI of 1.00, indicating unanimous agreement among the three experts regarding the relevance of each. The expert review supported retention of the original item content for the subsequent response-process evaluation.

Second, evidence based on response processes was examined through cognitive interviews with five members of the target population. The interviews explored how the respondents understood the item wording, interpreted the response continuum, selected response categories, and experienced ambiguity or cognitive burden. The findings were used to evaluate the suitability of the response format and to inform contextual refinement of the response options without altering the substantive content of the 12 items.

Third, evidence based on internal structure was evaluated in the field sample by testing the theorized six-domain measurement model. The 12 observed items were specified as indicators of six correlated first-order domains corresponding to the original FI framework. Factor loadings, model-fit indices, composite reliability, and average variance extracted were examined to evaluate how well the observed responses represented the proposed internal structure.

Analysis

Confirmatory factor analysis (CFA) was conducted in Jamovi version 2.4 using maximum likelihood estimation to evaluate the theorized six-factor measurement model. Model fit was assessed using chi-square, RMSEA, SRMR, CFI, and TLI, with interpretation guided by Hu and Bentler (1999), Kline (2013), and MacCallum et al. (1996). Standardized factor loadings of .40 were considered the minimum for interpretation, while stronger loadings were preferred (Joe F. Hair et al., 2011). Because no single fit index is sufficient to

establish model adequacy, fit indices were interpreted jointly.

Composite reliability (CR) and average variance extracted (AVE) were calculated for each domain as supplementary indicators of score consistency and convergent evidence. CR values of approximately .70 or higher and AVE values of .50

or higher are treated as conventional benchmarks (Joe F. Hair et al., 2011, 2020; Joseph F. Hair et al., 2019). McDonald's omega (ω) was also examined as a model-based reliability estimate for the total scale. Values below the conventional benchmarks were interpreted cautiously and not treated as evidence of adequate reliability or convergence without qualification.

Table 1
Respondent Demographic Data

Category	N = 272	Percentage (%)
Age		
18 – 29	78	28
30 – 40	194	72
Gender		
Female	225	84
Male	47	16
Disease Types		
Scleroderma	42	15.44
Diabetes	7	2.57
Hypertension	7	2.57
Heart	1	0.37
Cancer	4	1.47
Lupus	9	3.31
Rheumatoid arthritis	26	9.56
Other autoimmune diseases	47	17.28
Other diseases	129	47.43

Table 2
Aspects and Structure of the Flourishing Index Scale

Aspects	Indicators	No. Item
Happiness & Life Satisfaction	Individuals feel satisfaction and happiness in the life they lead.	1, 2
Physical & Mental Health	Individuals can assess their health conditions, both physical and mental, appropriately and objectively.	3, 4
Meaning & Purpose	Individuals have an interest in something, develop goals based on their interests, and actively attempt to achieve them.	5, 6
Character & Virtue	Individuals' behavior in promoting goodness in their environment even in bad situations, and their ability to sacrifice present happiness for better happiness in the future.	7, 8
Close Social Relationship	A meaningful, satisfying, and positive relationship with the surrounding environment with equal good practice.	9, 10
Financial & Material Stability	Individuals are free from worries about their living conditions, both financially and materially, such as over food, shelter, safety, and living expenses.	11, 12

Univariate distributional form was examined using item skewness before CFA. Skewness values within approximately ± 2 were treated as acceptable for descriptive normality screening (George & Mallery, 2010), while structural-model interpretation also considered the broader guidance discussed by Kline (2013). The observed skewness statistics are reported in the Results section.

Results

Evidence based on test content was supported by the expert review. All 12 items obtained an I-CVI of 1.00 from the three experts, indicating unanimous agreement that the items were relevant to the intended Flourishing Index domains. The content review required no significant changes to item content.

Evidence based on response processes was examined through cognitive interviews with five participants from the target population. They indicated that the original 11-point (0-10) response continuum required finer distinctions between adjacent numerical categories than the present research context required. The interviews also indicated that response options should be presented in a straightforward format consistent with the intended administration of the Indonesian version.

Accordingly, the 12 original item contents were retained, while the response format was modified from 0-10 to a 1-5 scale to align the response options with the study's needs and context. This modification concerned the response format, not the substantive content or theoretical domain structure of the index. Because the response metric differed from the original version, scores from the 1-5 format should not be assumed to be directly metric-equivalent to scores obtained using the original 0-10 format without further empirical evaluation.

Table 3 presents item-level descriptive statistics for the 12 FI items, with mean scores

ranging from 2.87 to 4.29 on the 5-point response format. Character and virtue showed the highest item mean (FL4_1: $M = 4.29$, $SD = 0.92$), whereas financial security had the lowest item mean (FL6_2: $M = 2.87$, $SD = 1.45$) and the largest dispersion. These descriptive differences indicate that material security was a comparatively more vulnerable domain in the sample. Still, they should not be interpreted as categorical levels of flourishing as no validated cut-off scores were used.

Evidence based on internal structure was first examined through item loadings and domain-level convergence. All 12 items loaded on their intended domains, with standardized loadings ranging from .558 to .971 (Table 3). The highest loadings were observed for item 12, financial security (.971), and item 9, close social relationships (.895). The results indicate that each item showed a significant association with its specified latent domain.

Five domains showed composite reliability between .735 and .885 and AVE between .590 and .794. In contrast, character and virtue demonstrated weaker evidence, with $CR = .600$ and $AVE = .433$, meaning this domain should be interpreted cautiously. McDonald's omega for the total scale was .866, indicating good overall internal consistency. Cronbach's alpha for the overall set of items was .841 and is reported as a supplementary descriptive estimate, as the instrument is multidimensional.

The six-factor CFA conducted using maximum likelihood estimation in jamovi version 2.4 produced results of $\chi^2(39) = 74.10$, $p < .001$, $RMSEA = .057$, $CFI = .977$, $TLI = .961$, and $SRMR = .034$ (Table 4). $RMSEA$ and $SRMR$ were below .08, while CFI and TLI exceeded .90, indicating generally acceptable model fit. Although the chi-square test was statistically significant, the remaining fit indices converged in supporting the adequacy of the theorized six-domain model. These findings, together with the standardized factor loadings, provide support for the internal structure of the adapted Indonesian Flourishing Index.

Table 3

Descriptive Statistics, Factor Loadings, Composite Reliability and Average Variance Extracted of the Flourishing Index

Dimension	Item	M	SD	Factor Loading	CR	AVE	Interpretation
Happiness & Life Satisfaction	FL1_1	3.57	1.11	.830	.804	.673	Good reliability
	FL1_2	3.59	1.04	.810			
Physical & Mental Health	FL2_1	3.06	1.13	.624	.735	.590	Good reliability
	FL2_2	3.29	1.17	.888			
Meaning & Purpose	FL3_1	3.85	1.13	.814	.744	.593	Good reliability
	FL3_2	3.91	1.19	.724			
Character & Virtue	FL4_1	4.29	0.92	.745	.600	.433	Marginal reliability and convergent evidence
	FL4_2	3.67	1.09	.558			
Close Social Relationship	FL5_1	3.68	1.12	.895	.885	.794	Good reliability
	FL5_2	3.42	1.17	.887			
Financial Security	FL6_1	3.05	1.48	.706	.834	.721	Good reliability
	FL6_2	2.87	1.45	.971			

Table 4

Goodness-of-Fit Indices for the Flourishing Index Measurement Model

Fit Index	Recommended Cut-off	Obtained Value
χ^2 (df)	–	74.10 (39)
p-value	> .05	< .001
RMSEA	≤ .08	0.057
CFI	≥ .90	0.977
TLI	≥ .90	0.961
SRMR	≤ .08	0.034

Discussion

The study provides validity evidence supporting the interpretation of scores from the Indonesian adaptation of the Flourishing Index related to individuals with chronic conditions. In line with current validity theory, the findings were evaluated through complementary evidence based on test content, response processes and internal structure, rather than treating validity as an inherent property of the instrument (AERA et al., 2014). Overall, the findings provide encouraging evidence for the use of the Indonesian FI with this population. Expert evaluation involving three experts yielded an I-CVI of 1.00,

indicating strong agreement regarding the relevance and representativeness of the items. Evidence based on response processes further supported modification of the original 0–10 response continuum to a 1–5 format to better accommodate the response needs of the target population, while retaining the content of the original 12 items and the conceptual structure proposed by VanderWeele (2017).

Evidence based on internal structure also generally supported the theorized six-domain structure of the FI. Confirmatory factor analysis using the maximum likelihood estimator in jamovi version 2.4 produced $\chi^2(39) = 74.10$, $p < .001$,

RMSEA = .057, CFI = .977, TLI = .961, and SRMR = .034. Although the chi-square test was statistically significant, the RMSEA, CFI, TLI, and SRMR values were within commonly recommended ranges, providing converging evidence that the six-factor model adequately represented the observed data. All 12 items also loaded significantly on their intended dimensions, with standardized factor loadings ranging from .558 to .971. These findings indicate that the empirical structure of the Indonesian adaptation is broadly consistent with VanderWeele's (2017) multidimensional conceptualization of flourishing. In line with this, previous study by Nurcahyo and Valentina (2024) also showed that Confirmatory Factor Analysis confirmed that a single-factor structure of the Flourishing Scale fit the data.

The reliability findings further strengthen this interpretation. McDonald's omega for the overall instrument was .866, indicating good internal consistency. At the domain level, five of the six dimensions demonstrated composite reliability values ranging from .735 to .885 and AVE values ranging from .590 to .794. The exception was character and virtue, which yielded CR = .600 and AVE = .433. Therefore, although the overall reliability of the adapted instrument was satisfactory, the character and virtue dimension warrants a more cautious interpretation. Its comparatively weaker psychometric performance may partly reflect the challenge of representing a broad moral and behavioral construct using only two items. Further studies should therefore examine whether this finding is replicated in other Indonesian samples before drawing strong conclusions about the measurement precision of this domain.

The satisfactory model fit and internal consistency observed in the study are broadly consistent with previous research examining the FI in different populations and cultural contexts. Previous studies have shown the applicability of

flourishing measures in health-related populations and provided evidence for their multidimensional structure across settings (Kelly-Hedrick et al., 2020; Lomas et al., 2024; Sattler et al., 2023).

Nevertheless, our findings should not be interpreted as demonstrating that the Indonesian version is psychometrically identical to versions used in other countries. The modification of the response continuum from 0–10 to 1–5 represents an adaptation of the response format to the needs of the research context. Therefore, direct metric equivalence between scores obtained using the 1–5 format and those obtained using the original 0–10 one cannot be assumed without further empirical examination.

The descriptive findings also provide insight into how individuals with chronic conditions experienced different domains of flourishing. Item means ranged from 2.87 to 4.29 on the 1–5 response format. Character and virtue had the highest mean score (FL4_1, $M = 4.29$, $SD = .92$), whereas financial security had the lowest (FL6_2, $M = 2.87$, $SD = 1.45$) and showed relatively wide variability. These findings should not be interpreted as indicating categorical levels of flourishing, as we did not establish validated cut-off scores in our study. Rather, they suggest that material and financial conditions may represent a comparatively vulnerable component of flourishing among individuals living with chronic health conditions.

The relatively lower scores observed for financial security are theoretically meaningful in the context of chronic illness. Chronic health conditions may require prolonged treatment, medication, regular medical monitoring, and adjustments in occupational and everyday functioning, which can generate significant financial demands. Consequently, financial stability may become an important contextual resource for maintaining well-being while coping

with persistent health challenges (VanderWeele & Lomas, 2023). This finding is consistent with VanderWeele's (2017) conceptualization of flourishing, in which financial and material stability constitutes an important domain alongside psychological, physical, relational and existential dimensions. Previous research involving people living with chronic illness similarly indicates that material circumstances interact with health, social functioning, and psychological well-being (Fuller-Thomson et al., 2016; Schmidt-Sane et al., 2023).

Including physical and mental health is also particularly relevant for those with chronic conditions. Flourishing does not imply the absence of illness; rather, individuals may continue to experience meaning, positive relationships, life satisfaction, and adaptive psychological functioning while managing long-term physical health problems. This distinction is important because positive mental health and psychopathology are not simply opposite ends of a single continuum (Keyes, 2005). Previous studies have similarly demonstrated close relationships between health status, subjective well-being, and flourishing-related outcomes (Diržytė & Perminas, 2021; Schmidt-Sane et al., 2023; Schotanus-Dijkstra et al., 2016). Moreover, a systematic review of flourishing in chronic disease identified biological, psychological, and social factors as relevant to flourishing among individuals living with chronic health conditions, suggesting that flourishing cannot be reduced to disease status alone (Rina, Surjaningrum, & Dewi, 2024). Therefore, incorporating physical and mental health within a broader flourishing framework allows researchers to examine well-being without reducing the experience of individuals with chronic conditions solely to symptoms or functional limitations.

Happiness and life satisfaction represent another important component of flourishing. Subjective evaluations of one's life provide

information that objective health indicators alone cannot fully capture. Individuals themselves are uniquely positioned to evaluate their satisfaction, positive experiences, and perceived quality of life. However, flourishing extends beyond subjective happiness. Life satisfaction has been associated with health-related behaviors and quality of life (Garrido et al., 2013; Strine et al., 2008), but a comprehensive evaluation of flourishing also requires consideration of meaning, relationships, health, virtue, and material circumstances (Chen et al., 2022; Ho et al., 2022; Levin, 2020). Consequently, a person may report satisfaction in some areas of life while simultaneously experiencing difficulties in other domains relevant to sustainable well-being.

Close social relationships are particularly important in this multidimensional perspective. Living with chronic illness often requires emotional, informational, and practical support from family members, friends, and other significant individuals. Supportive interpersonal relationships may help individuals cope with uncertainty, maintain everyday functioning, and preserve a sense of social connectedness despite illness-related limitations. Previous studies have highlighted the contribution of social relationships and social support to psychological adaptation and well-being in health-related contexts (Afatin et al., 2023; Cyranowski et al., 2013; Schmidt-Sane et al., 2023; Torres et al., 2024). This domain may be especially relevant in Indonesia, where interpersonal and family relationships can constitute important resources in responding to long-term health challenges.

Meaning and purpose further expand the assessment beyond emotional well-being. This domain is explicitly represented in the FI and has demonstrated good psychometric performance in several validation studies (Sattler et al., 2023; Stripp et al., 2024; Węziak-Białowska et al., 2019a). For individuals with chronic conditions, flourishing may involve maintaining personally

meaningful goals and developing ways of living that accommodate, rather than deny, the presence of illness. Edgar and Pattison (2016) emphasize that flourishing in healthcare involves more than achieving ideal physical health; it also concerns the ability to pursue meaningful forms of living within existing health circumstances. Research has similarly suggested that goal adjustment and optimism are associated with well-being among individuals experiencing chronic health problems (Ramírez-Maestre et al., 2019). Accordingly, the meaning and purpose dimension may capture an important psychological resource through which individuals maintain direction and personal significance despite long-term health limitations.

Character and virtue represent a theoretically distinctive domain of the FI as it extends well-being beyond positive feelings and personal satisfaction (Pieper, 1990; Rossi & Tappolet, 2016). VanderWeele (2017) conceptualized flourishing as involving not only feeling good, but also functioning in ways related to character and prosocial orientation. However, our findings indicate that this domain should be interpreted carefully from a measurement perspective. Although character and virtue demonstrated acceptable standardized loadings, the CR (.600) and AVE (.433) were lower than those of the other dimensions. Importantly, recent FI validation studies have reported similar psychometric patterns. The Korean validation of the FI reported relatively weak item-level associations for the Character and Virtue domain, with item correlations of .50 and .35, respectively (Ha et al., 2026). Consequently, the theoretical relevance of virtue should be distinguished from the empirical precision with which it was measured in this study. Future research could examine whether additional culturally appropriate indicators would better represent this domain in the Indonesian population.

Taken together, the findings demonstrate the value of examining flourishing as a multidimensional construct among individuals with chronic conditions, rather than focusing

exclusively on psychological distress or physical symptoms. The six domains capture complementary components of well-being, encompassing subjective evaluation, physical and mental health, meaning and purpose, character and virtue, close relationships, and financial security. The Indonesian adaptation therefore has potential as a research and supportive well-being assessment tool for understanding how individuals function across multiple life domains while living with chronic health conditions. Importantly, its use should remain focused on multidimensional well-being assessment rather than diagnosis or individual clinical decision-making.

Several study limitations should be considered. First, the sample was predominantly female and included heterogeneous chronic conditions, with several diagnostic categories represented by relatively few participants. Second, changing the response format from the original 0–10 continuum to a 1–5 scale means direct score comparability with studies using the original format cannot be assumed. Third, although the CFA results and overall McDonald's omega provide encouraging evidence, the comparatively weaker CR and AVE for character and virtue indicate that this domain requires further investigation. Future studies should therefore replicate the six-domain structure in larger and more diagnostically balanced samples; examine measurement invariance across relevant demographic and clinical groups; and directly compare the psychometric functioning of the 1–5 and original 0–10 response formats. Item response theory or other item-level approaches could also provide additional information regarding category functioning, item discrimination, and measurement precision.

Overall, the study adds validity evidence that supports interpreting scores from the Indonesian adaptation of the FI among individuals with chronic conditions. Expert evaluation supported evidence based on test content; evidence based on response processes informed the adaptation of the

response format; and evidence based on internal structure was supported by acceptable CFA indices, significant standardized factor loadings, and satisfactory overall reliability. Rather than establishing validity as a fixed property of the instrument, the findings strengthen the validity argument and its use in the Indonesian chronic-health context. Further replication and examination of the modified response format will strengthen the evidence supporting broader applications of the Indonesian FI.

Conclusion

The study provides evidence supporting the interpretation and use of scores from the Indonesian adaptation of the FI among adults with chronic conditions. Evidence from expert evaluation, cognitive interviews, confirmatory factor analysis, and reliability assessment generally supports the adapted instrument's content relevance, response processes, and six-domain internal structure. The findings also indicate satisfactory overall internal consistency, although the character and virtue domain requires

cautious interpretation because of its comparatively weaker reliability and convergent evidence. Importantly, the adaptation of the response format from the original 0–10 scale to a 1–5 one should be regarded as a contextual modification rather than evidence of direct metric equivalence with the original instrument.

The Indonesian FI may therefore provide a useful multidimensional measure for research and supportive well-being assessment among individuals living with chronic conditions in Indonesia, particularly by capturing psychological, physical, relational, existential, and financial aspects of flourishing within a single framework. However, its current evidence base does not support diagnostic use or individual clinical decision-making. Further research should replicate the six-domain structure in larger and more diverse chronic-condition populations; examine measurement invariance across relevant demographic and clinical groups; and directly evaluate the psychometric comparability of the modified 1–5 response format with the original 0–10 format.[]

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Author Contribution Statement

Amherstia Pasca Rina: Conceptualization; Funding Acquisition; Investigation; Methodology; Project Administration; Visualization; Writing Original Draft. **Triana Kesuma Dewi:** Data Curation; Formal Analysis; Investigation; Methodology; Resources; Writing, Review & Editing. **Suryanto Suryanto:** Resources; Validation; Writing, Review & Editing; Administration. **Benny Soliman:** Validation; Writing, Review & Editing. **Endang Retno Surjaningrum:** Conceptualization; Writing, Review & Editing; Supervision.

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