**Indonesian Journal of Global Health Research**
Volume 8 Number 6, December 2026
e-ISSN 2715-1972; p-ISSN 2714-9749
http://jurnal.globalhealthsciencegroup.com/index.php/IJGHR

# CROSS-CULTURAL ADAPTATION, VALIDITY, AND RELIABILITY OF THE SES6C INSTRUMENT IN INDONESIAN PATIENTS WITH HYPERTENSION

**Fariq Eka Setiyawan, Dimas Ria Angga Pribadi***
Department of Nursing, Faculty of Health Sciences, Universitas Muhammadiyah Surakarta, Jl. Ahmad Yani, Pabelan, Kartasura, Sukoharjo, Central Java 57162, Indonesia
*dra632@ums.ac.id

**ABSTRACT**
Hypertension requires ongoing disease management, making self-efficacy important for patients' ability to manage chronic disease. However, culturally and linguistically appropriate instruments for assessing self-efficacy among Indonesian patients with hypertension remain limited. This study aimed to conduct a cross-cultural adaptation and evaluate the validity and reliability of the Indonesian version of the 6-Item Self-Efficacy for Managing Chronic Disease Scale (SES6C). A non-experimental quantitative study with a cross-sectional approach was conducted. The validation process included content validity, pilot testing, Psychometric evaluation included examination of the factor structure using CFA, assessment of internal consistency, and evaluation of reliability across two measurement occasions.Content validity involved five experts, and pilot testing involved 15 patients. The content validity assessment yielded an I-CVI and S-CVI/Ave of 1.00,with 100% comprehensibility for all items, indicating excellent content validity. CFA factor loadings ranged from 0.532 to 0.775, but the one-factor model showed inadequate fit (CFI = 0.870; TLI = 0.783; RMSEA = 0.157). Cronbach's alpha was 0.801, while test-retest reliability showed an ICC of 0.805 (95% CI = 0.421–0.914; $p < 0.001$). The Indonesian SES6C demonstrated excellent content validity, good internal consistency, and good stability.

Keywords: chronic disease management; hypertension; psychometric properties; self-efficacy; SES6C

**How to cite (in APA style)**
Setiyawan, F. E., & Pribadi, D. (2026). Cross-Cultural Adaptation, Validity, and Reliability of the Ses6c Instrument in Indonesian Patients with Hypertension. Indonesian Journal of Global Health Research, 8(6), 1305–1314. https://doi.org/10.37287/ijghr.v8i6.2858.

## INTRODUCTION

Hypertension is a common chronic condition among adults and the elderly, and it is a health issue that requires long-term management (Brigita et al., 2023). This condition is characterized by a persistent increase in blood pressure and can develop without any obvious symptoms, which is why it is often referred to as a "silent killer." (Mirza et al., 2024). If not properly managed, hypertension can cause damage to target organs, including the heart, brain, retina, and kidneys (Sanusi, 2025). The rise in the prevalence of hypertension is also linked to lifestyle changes, obesity, lack of physical activity, excessive sodium intake, and unmanaged stress (Transyah et al., 2025). In Indonesia, hypertension remains a significant public health issue (Wahidin et al., 2025). The gap between the number of individuals who have been diagnosed and those who are receiving regular treatment indicates that a diagnosis alone does not guarantee successful disease management (Mohiuddin, 2023). Suboptimal management can increase the risk of complications and repeated health care needs (Shafrin et al., 2022). These conditions highlight the need for an approach to hypertension management that not only focuses on medical therapy but also takes into account patients' ability to manage their condition independently.

One of the psychological factors that plays a role in the management of chronic diseases is self-efficacy (Hladek et al., 2025). According to Bandura's Social Cognitive Theory, self-efficacy is an individual's belief in their ability to organize and carry out the actions necessary to achieve a specific goal (Fismasari et al., 2025). In the context of chronic illness, self-efficacy relates to a patient's confidence in coping with symptoms, engaging in healthy behaviors, overcoming barriers,

and maintaining disease management in daily life (Satink & Kos, 2025). In patients with hypertension, higher levels of self-efficacy could, in theory, promote adherence to disease management and lead to better blood pressure control (Natalia & Pribadi, 2026). Therefore, measuring self-efficacy is important to help researchers and healthcare professionals understand patients' ability to manage chronic diseases and to serve as a foundation for developing appropriate educational programs and interventions.

Measuring self-efficacy requires an instrument with good conceptual validity and psychometric properties (Qonita et al., 2025). One of the instruments developed to measure self-efficacy in managing chronic diseases is the 6-Item Self-Efficacy for Managing Chronic Disease Scale (SES6C). This instrument was developed by Lorig and her team at the Stanford Patient Education Research Center and is used to assess individuals' confidence in managing various aspects of chronic diseases (Lambert et al., 2022). SES6C encompasses the ability to manage symptoms, perform functional roles, manage emotional functioning, and interact with healthcare providers (Kleman et al., 2023). These aspects are relevant to hypertension management, which requires patients' active involvement (Xu et al., 2022).

Although the SES6C has been used and tested in various contexts, the use of an instrument developed in a specific language and culture with populations from different cultural backgrounds requires a process of cross-cultural adaptation and retesting of its psychometric properties (Sadeghi-Bazargani et al., 2024a). Previous research indicates that the SES6C has been studied in populations across several countries, including in different language and cultural versions. Studies on the validity and reliability of the Turkish version show that the instrument can be used to measure self-efficacy in the management of chronic diseases (Nermin Eroğlu & Gamze Temiz, 2023). Other research on the Japanese version also highlights the importance of evaluating psychometric properties when the instrument is applied in different cultural contexts (Hazumi et al., 2024). Differences in language and cultural context can influence item interpretation; therefore, adaptation should maintain semantic, conceptual, and cultural equivalence(Madadizadeh & Zare, 2024a).

In the Indonesian context, the need for a SES6C instrument that has been adapted to the local language and culture is crucial because an instrument that has not undergone adequate testing risks producing inaccurate measurements (Srinatania et al., 2025). Instruments that are translated without taking cultural context into account can lead to differences in the interpretation of items, so that the measurement results do not fully reflect the construct being measured (Hakim et al., 2020). The use of assessment tools must also be supported by empirical evidence regarding their validity and reliability before they are used more widely in research and health care practice (Etheridge & De Ruiter, 2025). Psychometric evaluation includes content validity, construct validity using CFA, internal consistency, and test-retest reliability(Lee, 2021).

This issue highlights the need to develop an Indonesian-language version of the SES6C instrument that is not only understandable to patients with hypertension but also has adequate evidence of validity and reliability (Ichsan et al., 2025). Cross-cultural adaptation is a crucial step in ensuring that each item retains the meaning of the original instrument while remaining appropriate to the context of patients in Indonesia (Rimayanti et al., 2023). Following the adaptation process, psychometric testing is necessary to ensure that the instrument reliably and scientifically validly measures the construct of self-efficacy in chronic disease management. (Campos-Romero et al., 2023). The instrument may support research and help healthcare professionals identify self-efficacy levels and develop appropriate interventions (Han et al., 2025).

Based on the above discussion, empirical evidence is still needed regarding the suitability of the Indonesian version of the SES6C for hypertensive patients in Indonesia, particularly following the cross-cultural adaptation process. This study aims to conduct a cross-cultural adaptation and to test

the validity and reliability of the Indonesian version of the Self-Efficacy for Managing Chronic Disease 6-Item Scale (SES6C) among patients with hypertension in Indonesia. This study is expected to provide psychometric evidence regarding the quality of the instrument, thereby serving as a basis for the use and further development of the SES6C in both research and clinical practice related to hypertension management in Indonesia.

## METHOD

This study employed a non-experimental quantitative design with a cross-sectional approach and instrument validation methods. This study focused on adapting the 6-Item Self-Efficacy for Managing Chronic Disease Scale (SES6C) for use in Indonesia and evaluating its validity and reliability among patients with hypertension. Data collection was carried out at Dr. Moewardi Regional General Hospital, Surakarta, between August and October 2026.

The study population consisted of patients diagnosed with hypertension who were receiving care at Dr. Moewardi Regional General Hospital in Surakarta. The sample was selected using purposive sampling. Inclusion criteria included patients diagnosed with hypertension, aged ≥20 years, able to communicate and understand the questionnaire independently or with assistance, willing to provide informed consent, and currently receiving care or registered at the study facility. Patients with cognitive impairment, language barriers, or acute or terminal conditions that hindered completion of the questionnaire were excluded from the study. The SES6C consists of six items. Based on a ratio of 20 respondents per item, the planned minimum sample size was 120 respondents. The study involved 120 respondents in the main test, while the test-retest was conducted on 80 respondents.

Cross-cultural adaptation was conducted through forward translation by two independent translators, synthesis of the translations, backward translation, expert panel evaluation, linguistic and cultural adjustments, and pilot testing among the target population. These steps were taken to maintain semantic, idiomatic, conceptual, and experiential equivalence between the original instrument and the Indonesian version. A pilot test was conducted with 15 respondents from the target population to assess comprehensibility and identify any potentially ambiguous items.

Content validity was assessed by five experts using a four-point scale based on the relevance and clarity of the items. Content validity was analyzed using the Item-Level Content Validity Index (I-CVI) and the Scale-Level Content Validity Index/Average (S-CVI/Ave). Item comprehensibility was assessed based on the proportion of respondents who stated that each item was understandable.

Construct validity was tested using Confirmatory Factor Analysis (CFA) to evaluate the fit of the one-factor SES6C model. Model fit indices included the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA), as well as standardized factor loadings. A CFI and TLI of ≥0.90 and an RMSEA of ≤0.08 were used as criteria for an acceptable model fit. Standardized factor loadings were examined alongside the model fit indices in assessing construct validity.

Internal consistency was assessed using Cronbach’s alpha, with a value of ≥0.70 considered an acceptable criterion for internal consistency. Test-retest reliability was assessed among 80 respondents by administering the instrument at two separate measurement time points. Score stability was assessed using the Intraclass Correlation Coefficient (ICC) with a 95% confidence interval.Data dikodekan, diinput, dan diperiksa kelengkapannya sebelum dianalisis. Analisis deskriptif digunakan untuk menggambarkan karakteristik responden, sedangkan analisis psikometrik meliputi I-CVI, S-CVI/Ave, CFA, Cronbach's alpha, dan ICC.

The study was conducted after obtaining ethical approval from the Ethics Committee of Dr. Moewardi Regional General Hospital, under approval number 232/II/HERC/2026. All participants

were provided with an explanation of the study's objectives, procedures, benefits, and their rights throughout the study and gave their informed consent. Participation was voluntary, and participants could refuse or withdraw from the study at any time. Identity confidentiality was maintained using codes, and data were reported in aggregate form.

## RESULT

This study involved 120 hypertensive patients. The participants' characteristics included age, gender, highest level of education, and duration since diagnosis of hypertension.

Table 1.
Characteristics of respondents (n = 120)

| Respondent Characteristics | f | % |
|---|---|---|
| Age (years) | | |
| Mean ± SD | 61,64 ± 11,62 | — |
| Age range | 36–89 | — |
| Gender | | |
| Male | 60 | 50,0 |
| Female | 60 | 50,0 |
| Highest level of education | | |
| No schooling | 13 | 10,8 |
| Elementary school | 24 | 20,0 |
| Junior high school | 16 | 13,3 |
| High school | 48 | 40,0 |
| Associate's degree | 2 | 1,7 |
| Bachelor's degree | 13 | 10,8 |
| Master's degree | 4 | 3,3 |
| Duration of hypertension diagnosis | | |
| 1–5 years | 60 | 50,0 |
| 6–10 years | 47 | 39,2 |
| >10 years | 13 | 10,8 |

Table 1, the mean age of the respondents was 61.64 ± 11.62 years, with a range of 36–89 years. The proportion of male and female respondents was balanced. The most common highest level of education was high school, while the majority of respondents had been diagnosed with hypertension for 1–5 years.

Table 2.
Results of the Content Validity and Comprehensibility Test for the Indonesian Version of the SES6C

| Test | Results | Notes |
|---|---|---|
| I-CVI Q1 | 1,00 | Valid |
| I-CVI Q2 | 1,00 | Valid |
| I-CVI Q3 | 1,00 | Valid |
| I-CVI Q4 | 1,00 | Valid |
| I-CVI Q5 | 1,00 | Valid |
| I-CVI Q6 | 1,00 | Valid |
| S-CVI/Ave | 1,00 | Content validity is very good |
| Comprehension of Q1-Q6 | 100% | All items have been understood |

The evaluation by five experts showed that all SES6C items had an I-CVI of 1.00 and an S-CVI/Ave of 1.00. A comprehensibility test conducted on 15 respondents showed that all items were well understood.

Table 3.
Results of the Confirmatory Factor Analysis of the Indonesian Version of the SES6C

| Indicator | Results |
|---|---|
| CFI | 0,870 |
| TLI | 0,783 |
| RMSEA | 0,157 |
| Range of factor loadings | 0,532–0,775 |
| Highest factor loading | Q5 = 0,775 |
| Lowest factor loading | Q1 = 0,532 |

The CFA results show that the six items have factor loadings ranging from 0.532 to 0.775. However, the CFI value of 0.870, the TLI value of 0.783, and the RMSEA value of 0.157 indicate that the one-factor model does not yet have adequate fit.

Table 4.
Reliability Test Results for the Indonesian Version of the SES6C

| Types of reliability | Results |
|---|---|
| Cronbach's alpha | 0,801 |
| ICC | 0,805 |
| 95% CI ICC | 0,421–0,914 |
| P | <0,001 |
| N *test-retest* | 80 |

The CFA results show that the six items have factor loadings ranging from 0.532 to 0.775. However, the CFI value of 0.870, the TLI value of 0.783, and the RMSEA value of 0.157 indicate that the one-factor model does not yet have adequate fit.

Overall, the six items of the Indonesian version of the SES6C have been provisionally retained. The results for content validity and comprehensibility were excellent, while internal consistency and test-retest reliability were good. However, construct validity has not yet been fully established, as the one-factor model in the CFA did not demonstrate adequate fit.

## DISCUSSION

The results of the study indicate that the cross-cultural adaptation process of the Indonesian version of the SES6C produced an instrument with good content validity and comprehensibility. All six items achieved an I-CVI score of 1.00 and an S-CVI/Ave score of 1.00 based on the assessments of five experts. These results demonstrate a high degree of alignment between the content of each item and the construct of self-efficacy in chronic disease management. Furthermore, all items were understood by respondents during the pilot test. This indicates that the translation and linguistic adaptation process has produced statements that are acceptable in the context of patients with hypertension in Indonesia. Content validity is a critical stage in instrument adaptation because equivalence of meaning is determined not only by linguistic translation but also by the conceptual equivalence of the constructs being measured within the target cultural context. (Cruchinho et al., 2024).

The high content validity results also indicate that all six SES6C items remain relevant after undergoing a cross-cultural adaptation process. This is important because instruments developed in different linguistic and cultural contexts cannot be used directly based solely on literal similarities in meaning. Adaptations must consider whether the terms and statements can be understood by the target population while still representing the same construct (Acar, 2025). In this study, the 100% comprehensibility test results provide preliminary support that each item is understandable to Indonesian respondents. However, these results primarily indicate linguistic and content appropriateness; therefore, they cannot yet be used as evidence that the instrument's factor structure is fully appropriate.

In the construct validity analysis using CFA, all items had factor loadings above 0.50, ranging from 0.532 to 0.775. These results indicate that each item contributes to the construct being measured. Item Q5 had the highest factor loading, while Q1 had the lowest. However, the fit of the one-factor model was inadequate, as indicated by a CFI of 0.870, a TLI of 0.783, and an RMSEA of 0.157. Thus, the CFA results suggest that the presence of adequate factor loadings at the item level does not automatically indicate that the overall one-factor structure of the SES6C is appropriate for this study's population. (Acar, 2025) .

These findings should be considered in the context of the adaptation of the SES6C for patients with hypertension in Indonesia. The SES6C instrument is primarily used to assess self-efficacy in the

management of chronic diseases in general, whereas this study tested it in a population with hypertension. Differences in population characteristics, the healthcare context, language, and patients' experiences in managing chronic diseases may influence how respondents understand and respond to each item (Madadizadeh & Zare, 2024b). Therefore, model fit issues in CFA do not directly indicate that a particular item should be removed. Removing items without a theoretical basis and additional psychometric evaluation may actually reduce the coverage of the construct being measured (Xiao et al., 2024).

The results of this study indicate that the assessment of the construct validity of the Indonesian version of the SES6C needs to be continued. Further analysis could include an examination of the factor structure and item characteristics, as well as testing on a larger sample and a population with more diverse characteristics. (Finch et al., 2025). This evaluation is important to determine whether the single-factor structure used in the original instrument remains appropriate in the Indonesian context or requires adjustment. Thus, the CFA results in this study should be viewed more as preliminary evidence of structural validity rather than as a basis for claiming that the instrument has been fully validated.

In terms of reliability, a Cronbach's alpha value of 0.801 indicates good internal consistency. This value indicates that the six items are sufficiently correlated in measuring the same construct (Alkhadim, 2022). Good internal consistency also supports content validity because the items retained in the instrument demonstrate coherence within a single measurement tool. However, good reliability cannot be used as a substitute for evidence of validity. An instrument may demonstrate consistency in responses across items but still requires evidence that the construct being measured aligns with its intended purpose. (Peeters & Harpe, 2022).

Measurement stability also yielded good results. An ICC value of 0.805 across 80 respondents indicates good agreement between the initial measurement and the follow-up measurement. This supports the finding that SES6C scores are relatively stable when the instrument is administered again to the same respondents (Sadeghi-Bazargani et al., 2024b). However, the relatively wide ICC confidence interval—0.421–0.914—indicates uncertainty in these stability estimates. Therefore, the test-retest results should be considered in conjunction with the sample size and respondent characteristics when assessing the stability of the instrument (Dolnicar et al., 2022).

Overall, the research findings provide preliminary evidence that the Indonesian version of the SES6C has excellent content validity, good comprehensibility, good internal consistency, and good measurement stability. However, the CFA results indicate that the one-factor structure has not yet achieved adequate fit. Therefore, the six items can be retained on a provisional basis for further development and evaluation; however, the instrument cannot yet be said to possess fully adequate construct validity. This study provides a foundation for future research to conduct further psychometric testing on a more diverse population of hypertensive patients in Indonesia. (Salami et al., 2023).

In the context of nursing, the availability of self-efficacy instruments for chronic disease management that have undergone linguistic and cultural adaptation can support the assessment of patients' ability to manage their conditions. Instruments with established validity and reliability can be used as a measurement tool in research on hypertension management as well as in the evaluation of interventions aimed at improving self-efficacy. (Mengjiao et al., 2025). However, given that the structural validity results in this study are not yet optimal, the use of the Indonesian version of the SES6C for individual clinical decision-making should be approached with caution until stronger psychometric evidence becomes available.

## CONCLUSION

The Indonesian version of the SES6C has undergone a cross-cultural adaptation process and demonstrates content appropriateness and good comprehensibility among patients with hypertension in Indonesia. The instrument also exhibits good internal consistency and measurement stability; therefore, the six items can be provisionally retained as a tool for measuring self-efficacy in the management of chronic diseases. However, structural validity through CFA testing has not yet shown adequate model fit; therefore, the Indonesian version of the SES6C cannot yet be declared fully validated and still requires further psychometric evaluation in a broader population. This study contributes preliminary psychometric evidence for the development of a self-efficacy instrument for chronic disease management that is appropriate for the Indonesian linguistic and cultural context.

## REFERENCES

Acar, T. O. (2025). Improving Cross-Cultural Psychometric Scales: A Focus on Readability. Measurement: Interdisciplinary Research and Perspectives, 23(1), 90–100. https://doi.org/10.1080/15366367.2023.2292936

Alavi, M., Biros, E., & Cleary, M. (2024). Notes to Factor Analysis Techniques for Construct Validity. Canadian Journal of Nursing Research, 56(2), 164–170. https://doi.org/10.1177/08445621231204296

Alkhadim, G. S. (2022). Cronbach's Alpha and Semantic Overlap Between Items: A Proposed Correction and Tests of Significance. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.815490

Brigita, M., Hijrawati, H., & Artama, S. (2023). Characteristics and adherence of the elderly to the management of hypertension treatment. Jurnal Ilmiah Kesehatan Sandi Husada, 12(2), 435–444. https://doi.org/10.35816/jiskh.v12i2.1114

Campos-Romero, S., Lucchini Raies, C., Rodríguez, C., Muñoz, P., Márquez-Doren, F., & Bustamante-Troncoso, C. (2023). Adaptación cultural y validación del instrumento de Autoeficacia para el manejo de enfermedades crónicas en población chilena. Revista Médica de Chile, 151(12), 1596–1603. https://doi.org/10.4067/s0034-98872023001201596

Cruchinho, P., López-Franco, M. D., Capelas, M. L., Almeida, S., Bennett, P. M., Miranda da Silva, M., Teixeira, G., Nunes, E., Lucas, P., & Gaspar, F. (2024). Translation, Cross-Cultural Adaptation, and Validation of Measurement Instruments: A Practical Guideline for Novice Researchers. Journal of Multidisciplinary Healthcare, Volume 17, 2701–2728. https://doi.org/10.2147/JMDH.S419714

Dolnicar, S., Grün, B., & MacInnes, S. (2022). Assessing survey response stability: A complementary quality assurance protocol for survey studies in the social sciences. Social Sciences & Humanities Open, 6(1), 100339. https://doi.org/10.1016/j.ssaho.2022.100339

Nermin Eroğlu, & Gamze Temiz. (2023). The 6-item Self-Efficacy Scale in the Management of Chronic Disease in Individuals with Multiple Sclerosis (MS-CHOYO): Validity and Reliability Study. İzmir Katip Çelebi Üniversitesi Sağlık Bilimleri Fakültesi Dergisi, 8(3), 963–968. https://doi.org/10.61399/ikcusbfd.1245472

Etheridge, J. T., & De Ruiter, M. (2025). To Adapt or Not to Adapt: A Decision-Making Tool for Measurement Instrument Adaptation. Academy of Management Proceedings, 2025(1). https://doi.org/10.5465/AMPROC.2025.24057poster

Finch, W. H., French, B. F., Immekus, J. C., & Dai, S. (2025). Developing validity evidence. In Educational and Psychological Measurement (pp. 213–240). Routledge. https://doi.org/10.4324/9781003439769-10

Fismasari, Z., Waluyo, W. B., Hendrawan, B. D., & Latifah, W. U. (2025). The Effect of Self-Efficacy on Individual Performance: a Theoretical Review and Practical Implications. Formosa Journal of Applied Sciences, 4(6), 1819–1826. https://doi.org/10.55927/fjas.v4i6.190

Hakim, A. R., Wang, S.-T., Widiantoro, F. X., Hannan, M., Wang, C.-J., & Fetzer, S. J. (2020). The Indonesian Version of the Exercise Self-Efficacy Scale: Cross-cultural Adaptation and

Psychometric Testing. Asian Nursing Research, 14(5), 300–305. https://doi.org/10.1016/j.anr.2020.08.008

Han, H.-R., Benjasirisan, C., Metlock, F. E., Tesfai, Y., & Commodore-Mensah, Y. (2025). Use of the Hypertension Self-Care Profile: A Scoping Review. International Journal of Environmental Research and Public Health, 22(8), 1244. https://doi.org/10.3390/ijerph22081244

Hazumi, M., Kataoka, M., Nakashita, A., Usuda, K., Miyake, M., Kamikawa, C., Nishi, D., & Kuroda, N. (2024). Psychometric property of the Japanese version of self-efficacy for managing chronic disease scale in individuals with chronic diseases. Heliyon, 10(22), e40218. https://doi.org/10.1016/j.heliyon.2024.e40218

Hladek, M. D., Reimer, T., Casey, J., Nkimbeng, M., Peeler, A., Nelson, K. E., Taylor, J., Han, H.-R., & Szanton, S. L. (2025). Measuring self-efficacy in U.S. older adults with chronic disease: a systematic review. Aging & Mental Health, 29(10), 1764–1773. https://doi.org/10.1080/13607863.2025.2511226

Ichsan, B., Herawati, E., Basuki, S. W., Pramudyatama, I. W., & Khoiriyah, U. (2025). Development and Validation of Instruments to Measure Medication Adherence in Hypertensive Patients (MAHP): The Indonesian Case. Journal of Health Research, 39(6). https://doi.org/10.56808/2586-940X.1176

Kleman, C., Magnus, J. M., Andrews, M., Meyer, K., & Lutz, B. J. (2023). The work of managing a chronic illness: A job description. Journal of Evaluation in Clinical Practice, 29(1), 166–180. https://doi.org/10.1111/jep.13754

Lambert, S. D., Bartlett, S. J., McCusker, J., Yaffe, M., Ciampi, A., Belzile, E., & de Raad, M. (2022). Development and psychometric evaluation of the CanSmart questionnaire to measure chronic disease self-management tasks. BMC Psychology, 10(1), 293. https://doi.org/10.1186/s40359-022-00995-2

Lee, E.-H. (2021). Psychometric properties of an instrument 3: convergent, discriminant, known-groups, and criterion validity. Korean Journal of Women Health Nursing, 27(3), 176–179. https://doi.org/10.4069/kjwhn.2021.08.18

Madadizadeh, F., & Zare, F. (2024a). A Gentle Introduction to Cross-Cultural Adapting of Questionnaires in Medical Research. Journal of Community Health Research. https://doi.org/10.18502/jchr.v12i36.14793

Madadizadeh, F., & Zare, F. (2024b). A Gentle Introduction to Cross-Cultural Adapting of Questionnaires in Medical Research. Journal of Community Health Research. https://doi.org/10.18502/jchr.v12i36.14793

Mengjiao, L., Xujie, Z., Ping, J., Liwen, H., Yuping, N., Yangjing, Z., & Jianjun, Y. (2025). Self-management assessment tools for people with hypertension: a scoping review. BMC Nephrology, 26(1), 219. https://doi.org/10.1186/s12882-025-04134-y

Menon, V., Grover, S., Gupta, S., Indu, P., Chacko, D., & Vidhukumar, K. (2025). A primer on reliability testing of a rating scale. Indian Journal of Psychiatry, 67(7), 725–729. https://doi.org/10.4103/indianjpsychiatry_584_25

Mirza, M., Hameda Nishath, S., & Umaira Saeed, F. (2024). The Silent Storm: Understanding Hypertension. International Journal of Innovative Science and Research Technology (IJISRT), 3405–3415. https://doi.org/10.38124/ijisrt/IJISRT24APR1387

Mohiuddin, A. K. (2023). Adherence to Medication and Treatment Guidelines: Most Important but Mostly Despised. Clinical Sciences and Clinical Research, 1(1), 01–03. https://doi.org/10.58489/2836-8959/001

Natalia, E. D., & Pribadi, R. A. (2026). The Relationship Between Self-Efficacy and The Ability to Perform Physical Activities in Patients With Hypertension. Physical Activities in Patients with Hypertension. Indonesian Journal of Global Health Research, 8(2), 1003–1010. https://doi.org/10.37287/ijghr.v8i2.695

Peeters, M. J., & Harpe, S. E. (2022). Contemporary conceptualization of measurement validity. In Contemporary Research Methods in Pharmacy and Health Services (pp. 575–582). Elsevier. https://doi.org/10.1016/B978-0-323-91888-6.00020-X

Qonita, Q., Nugraha, D., & Iskandar, B. (2025). Analisis Validitas dan Reliabilitas Instrumen Sikap dan Keyakinan Guru PAUD dalam Pembelajaran STEAM. Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini, 9(6), 3580–3591. https://doi.org/10.31004/obsesi.v9i6.7714

Rani, S., & . S. (2023). Self-efficacy as a multifaceted belief. International Journal of Advanced Biochemistry Research, 7(2S), 420–423. https://doi.org/10.33545/26174693.2023.v7.i2Sf.245

Rimayanti, U. P., Mizuno, M., Kadar, K., Madjid, A., Sahraeny, S., Effendy, C., Setiyarini, S., & Mayers, T. (2023). Ensuring reliability and cultural validity of the Indonesian version of the Quality Of Life Index for patients with cancer. Research in Nursing & Health, 46(5), 527–537. https://doi.org/10.1002/nur.22334

Sadeghi-Bazargani, H., Soori, H., Motevalian, S. A., Aboubakri, O., Jafari-Khounigh, A., Razzaghi, A., Khankeh, H. R., Heydari, S. T., Rezapur Shahkolai, F., Sehat, M., Khorasani Zavareh, D., Asghari-Jafarabadi, M., Imani, A., Alizadeh Aghdam, M. B., Poustchi, H., Rezaei, M., & Golestani, M. (2024a). The Factor Structure and Generalizability of the Iranian Socioeconomic Status (SES) Questionnaire Administered in a Nationally Divergent Population. Medical Journal of The Islamic Republic of Iran. https://doi.org/10.47176/mjiri.38.37

Sadeghi-Bazargani, H., Soori, H., Motevalian, S. A., Aboubakri, O., Jafari-Khounigh, A., Razzaghi, A., Khankeh, H. R., Heydari, S. T., Rezapur Shahkolai, F., Sehat, M., Khorasani Zavareh, D., Asghari-Jafarabadi, M., Imani, A., Alizadeh Aghdam, M. B., Poustchi, H., Rezaei, M., & Golestani, M. (2024b). The Factor Structure and Generalizability of the Iranian Socioeconomic Status (SES) Questionnaire Administered in a Nationally Divergent Population. Medical Journal of The Islamic Republic of Iran. https://doi.org/10.47176/mjiri.38.37

Salami, S., Choo, S. S., Mohd Said, F., & Wilandika, A. (2023). Psychometric Properties of The Indonesian Version of Hypertension Self Care Profile. Malaysian Journal of Medicine and Health Sciences, 19(4), 231. https://doi.org/10.47836/mjmhs.19.4.34

Sanusi, A. (2025). Consequences of Hypertension. https://doi.org/10.5772/intechopen.1008447

Satink, T., & Kos, D. (2025). Self-management and Self-efficacy in Supporting Occupational Engagement. In Routledge Companion to Occupational Therapy (pp. 362–376). Routledge. https://doi.org/10.4324/9781003526766-28

Shafrin, J., Marijam, A., Joshi, A. V., Mitrani-Gold, F. S., Everson, K., Tuly, R., Rosenquist, P., Gillam, M., & Ruiz, M. E. (2022). Impact of suboptimal or inappropriate treatment on healthcare resource use and cost among patients with uncomplicated urinary tract infection: an analysis of integrated delivery network electronic health records. Antimicrobial Resistance & Infection Control, 11(1), 133. https://doi.org/10.1186/s13756-022-01170-3

Srinatania, D., Sansuwito, T. bin, & Ahmed, I. A. (2025). Translation And Validation Of Social-Emotional Development Scale In Indonesian Language. Holistic Nursing Plus, 3(1), 133–140. https://doi.org/10.58439/hnp.v3i1.323

Transyah, C. H., Daeng Ramadhan Salim, Rika Syafitri, & Bustami Rusdi. (2025). Hubungan gaya hidup pasien dengan kejadian hipertensi. Jurnal Amanah Kesehatan, 7(1), 36–45. https://doi.org/10.55866/jak.v7i1.275

Wahidin, M., Mustikawati, I. S., Handayani, R., & Letelay, A. M. (2025). Overview of Hypertension Prevalence and Its Main Risk Factors in Indonesia – a District-Level Data Analysis. Amerta Nutrition, 9(3), 438–442. https://doi.org/10.20473/amnt.v9i3.2025.438-442

Xiao, L., Hau, K., & Wang, M. D. (2024). Revisiting the Usage of Alpha in Scale Evaluation: Effects of Scale Length and Sample Size. Educational Measurement: Issues and Practice, 43(2), 74–81. https://doi.org/10.1111/emip.12604

Xu, X., Guo, T., Liu, Z., Chen, P., Zhang, Y., Ji, Q., & Xie, H. (2022). A Systematic Review of Patient Preferences, Expectations, and Values for the Management and Treatment of

Hypertension. Patient Preference and Adherence, Volume 16, 2867–2876. https://doi.org/10.2147/PPA.S388356