



SELF-CARE OF CHRONIC ILLNESS INVENTORY: SCOPING REVIEW

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ABSTRACT

The increasing prevalence of chronic diseases and the complexity of comorbidities demand a systematic management approach. The Self-Care of Chronic Illness Inventory (SC-CII) is an instrument that assesses self-care behaviors through three main domains: maintenance, monitoring, and management. This study aims to conduct a scoping review of the validity, reliability, and application of the SC-CII across chronic conditions and cultural settings. The method follows the PRISMA-ScR guidelines with an article search through PubMed and Scopus databases with articles from 2022 through 2024. Of the 765 articles identified, five were used that met the criteria. Articles that did not meet the inclusion criteria were eliminated, including publications over five years old, not available in open access, not in English, and not scientific articles. Studies were also eliminated if they had incomplete data, duplication, could not be downloaded in full, did not have an abstract, or did not match the focus of the study. Articles discussing chronic stroke and articles with irrelevant discussion were also excluded from the review. The results showed that the SC-CII has high construct validity and reliability in both the original and translated versions. The three domains showed a consistent and theoretically relevant factor structure. This instrument is used effectively in populations with multiple chronic conditions such as hypertension, diabetes, heart failure, COPD, and chronic kidney disease. The SC-CII can identify contextual determinants in self-care decision making and support the development of culturally adaptive educational interventions. In conclusion, the SC-CII is a valid and reliable multidimensional instrument, and contributes significantly to evidence-based nursing practice and the person-centered care approach.

Keywords: clinical practice; nursing study; reliability; self-care; validity

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INTRODUCTION

Global epidemiological changes show a significant increase in the prevalence of chronic diseases, accompanied by the complexity of comorbidities and the need for long-term care. This condition requires the health care system to develop a more holistic, integrated, and sustainable management approach. In this context, self-care becomes an essential element in the management of chronic diseases because the active involvement of individuals in caring for themselves has been shown to reduce the number of relapses, improve quality of life, and reduce the burden on the health care system. (Phonphet et al., 2023) Self-care behavior evaluation requires an instrument that is highly valid and reliable and can be adapted to various cultural and clinical contexts. The Self-Care of Chronic Illness Inventory (SC-CII) is one of the instruments developed to measure self-care behavior in individuals with chronic illness through three main domains: self-care maintenance, monitoring, and management. This instrument has been widely used and has shown good psychometric performance in various language versions and populations. (Riegel et al., 2019) .

The SC-CII has undergone validation tests in various countries and populations. The extent to which this instrument has structural consistency, cross-cultural adaptability, and sufficient reliability in measuring the construct of self-care behavior still requires further

mapping. This study aims to conduct a scoping review of the literature discussing the validity, reliability, and application of the SC-CII in the context of various chronic diseases and different cultural backgrounds to assess its potential use in nursing practice and health research.

METHOD

This study is a scoping review that aims to map scientific evidence related to the validity, reliability, and application of the Self-Care of Chronic Illness Inventory (SC-CII) instrument in various chronic disease contexts and cultures. Implementing this review refers to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines to ensure transparency and systematicity in reporting results. The literature search strategy was developed comprehensively with the help of professional librarians and was carried out on two central databases, namely PubMed and Scopus. The selection of keywords was adjusted to relevant terms, and the right Boolean operators were used to optimize search results. The inclusion criteria for this study included English-language scientific journal articles published in the last five years (2020–2025), with a primary focus on the validity and reliability of the SC-CII, or its application in the context of chronic diseases. The exclusion criteria included articles that were not freely available (open access), studies involving populations with non-chronic diseases, and publications that were not included in the journal article category (e.g., proceedings, short reviews, or abstracts without full text).

The article selection process was done through four stages: initial identification, title and abstract screening, eligibility evaluation through full-text review, and the final inclusion stage. Of the total 765 articles found, 588 articles from PubMed and 177 from Scopus, five articles met all the criteria and were included in the final synthesis. All selected articles were analyzed and mapped systematically by extracting important information, including author identity, year of publication, location, research design, target population, and key findings related to the psychometric characteristics of the SC-CII. Data extraction was carried out manually and carefully to ensure the accuracy and sharpness of the analysis. (Mak & Thomas, 2022)

RESULT

The Self-Care of Chronic Illness Inventory (SC-CII) instrument has been widely used to measure self-care behavior in individuals with chronic diseases. The validity and reliability of this instrument have been proven through various cross-country and population studies. A study conducted by (Arapi et al., 2023) showed that the SC-CII has excellent construct validity. The three main dimensions of this instrument—self-care maintenance, self-care monitoring, and self-care management showed significant correlations ($p < 0.001$) with relevant theoretical constructs such as self-efficacy in care, depression levels, and quality of life both physically and mentally. These results indicate that the SC-CII consistently represents self-care behavior by the underlying theoretical framework. In addition, significant differences were found based on gender, where male patients with multiple chronic diseases had higher scores on self-care maintenance ($p = 0.004$) and self-care monitoring ($p = 0.002$) than female patients. However, no significant differences were found in the self-care management dimension. This study also highlights the importance of dyadic care patterns, where patients actively involved in care decision-making show significantly higher SC-CII scores than patients in caregiver-oriented care patterns.

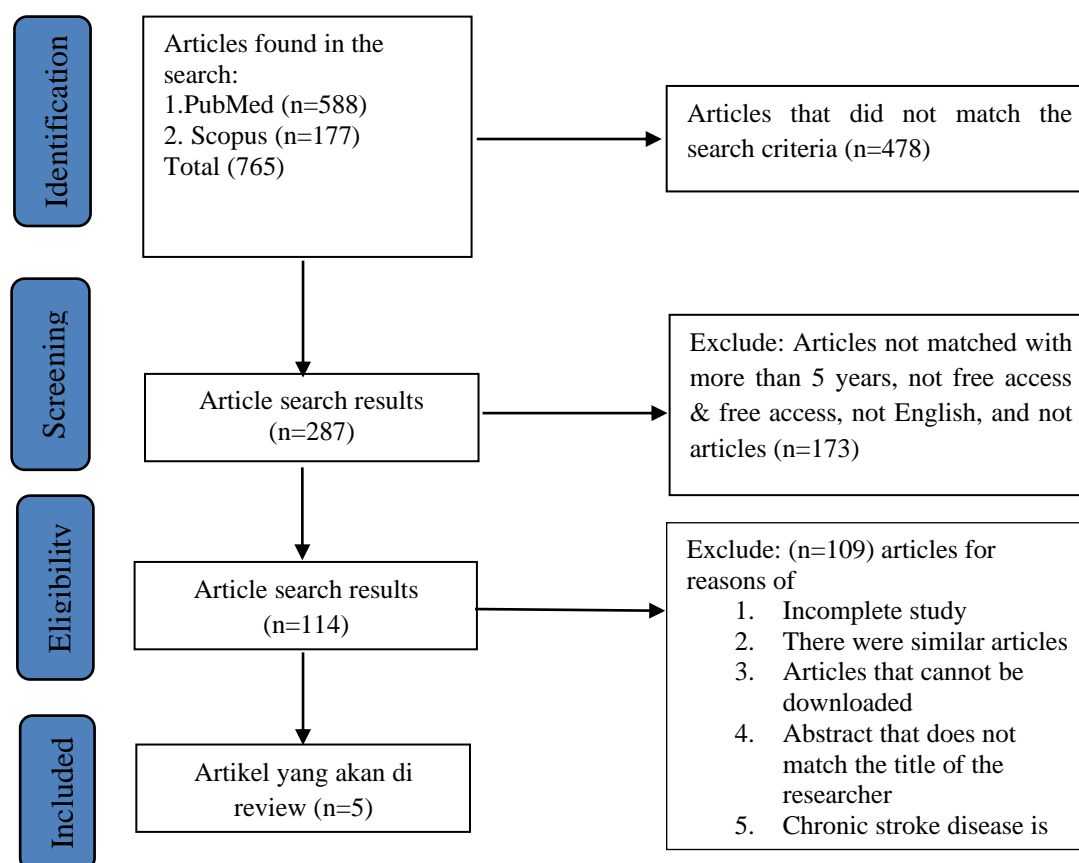


Figure 1. Flow diagram for database search

The validity and reliability of the Spanish version of this instrument (SC-CII-Sp) have also been confirmed through a study by (Hernández-Padilla et al., 2024) , involving an elderly population with multimorbidity in the community. Content validity was obtained through an assessment by 16 experts, with the item-content validity index (i-CVI) for all items above 0.78 and a significant Fleiss' Kappa value ($p < 0.001$), indicating a high level of agreement between experts. Convergent validity was obtained through a significant correlation between the SC-CII-Sp scores and the Spanish Chronic Disease Self-Efficacy Scale (SCD-SE), with $r = 0.645$ for maintenance, $r = 0.577$ for monitoring, and $r = 0.510$ for management (all $p < 0.001$). In terms of reliability, this instrument shows good internal consistency with coefficients ranging from 0.67 to 0.86 (Arapi et al., 2023) and Cronbach's alpha above 0.7 for all three subscales. (Hernández-Padilla et al., 2024) . In addition, the confirmatory factor analysis (CFA) test showed the suitability of the three-dimensional model with Comparative Fit Index (CFI) values between 0.93 and 1.00. Temporal reliability is also very good, indicated by the Intraclass Correlation Coefficient (ICC) values of 0.872, 0.985, and 0.926 for each dimension. These findings overall confirm that the SC-CII is a valid and reliable instrument in various populations and cultural contexts.

In terms of application, SC-CII has been widely used to evaluate self-care behavior in various chronic diseases. A study by Arapi et al. (2023) showed the application of SC-CII in older adults with multiple chronic conditions (MCC), with the main prevalence of hypertension (87.6%), diabetes mellitus (74.5%), and heart failure (44.8%). Other diseases such as COPD, osteoarthritis, bronchial asthma, and chronic kidney disease were also recorded as part of the comorbidity profile. Self-care behavior has been shown to vary depending on the type of disease. Patients with hypertension tend to focus on lifestyle changes, while diabetic patients require strict management of glucose levels and diet. Heart failure patients face challenges in recognizing and monitoring complex symptoms. Comorbidity complicates self-care consistency due to overlapping symptoms and therapies. Research by (Page et al., 2022) SC-

CII can describe the nuances of different self-care behaviors based on the disease context. In diabetic patients, time pressure and social support are determining factors for adherence to medication and diet, while in cardiovascular disease, high risk perception influences decision making. In the case of chronic respiratory diseases, adaptation to physical limitations is an important aspect, while in mental health disorders and chronic pain, emotional and social support are the main determinants of successful self-care. In individuals with multimorbidity, the SC-CII illustrates the complex interactions between various contextual factors, emphasizing the need for an integrated approach to disease management.

The SC-CII is important in supporting evidence-based assessment and intervention processes in clinical practice. Studies by De Maria et al. (2021) and Osokpo et al. showed that the SC-CII allows healthcare workers, especially nurses, to assess patients' capacity to carry out self-care behaviors independently. This instrument can identify weaknesses in patient self-care, such as non-adherence to therapy or delays in recognizing symptoms. The results of this assessment help design more personalized educational interventions oriented to patients' specific needs. In addition, the SC-CII strengthens communication between patients and healthcare providers through accurate data-based discussions, thereby improving the quality of shared decision-making. In the realm of research, the SC-CII has high scientific value as a psychometric measurement tool that has been tested across cultures. De Maria et al. (2021) used a measurement invariance approach to ensure consistent construct interpretation across three countries—Italy, Sweden, and the United States—thus allowing for valid cross-cultural comparisons. Meanwhile, Osokpo et al. explored the application of SC-CII version 3 in an African immigrant population. They combined it with the Self-Care Self-Efficacy Scale, which showed that self-efficacy played a greater role in determining self-care behavior than cultural acculturation. Using standardized scores (range 0–100) also facilitates comparability between studies and integration in intervention trial designs. Therefore, SC-CII is relevant not only as an evaluative tool but also as a scientific basis in formulating health policies and interventions that are responsive to cultural and social diversity.

DISCUSSION

The Self-Care of Chronic Illness Inventory (SC-CII) instrument has gained wide recognition as a valid and reliable measurement tool in evaluating self-care behaviors of individuals with chronic illness. The construct validity of the SC-CII has been demonstrated by various studies, including Arapi et al. (2023), which showed significant correlations between the three main domains— *self-care maintenance*, *monitoring*, and *management* —with theoretical constructs such as self-efficacy, depression levels, and physical and mental quality of life ($p < 0.001$). The Spanish version of the SC-CII (SC-CII-Sp) has also been shown to be valid for use in an elderly population with multimorbidity, supported by content validity from 16 experts ($i\text{-CVI} \geq 0.78$; significant Fleiss' Kappa) as well as strong convergent validity with the Spanish Chronic Disease Self-Efficacy scale ($r = 0.645\text{--}0.510$; $p < 0.001$) (Hernández-Padilla et al., 2024). Similar validity was also demonstrated by the Mandarin version in the elderly with *multiple chronic conditions* (Jin et al., 2023) and in cancer patients (Di Nitto et al., 2025), which was strengthened through confirmatory factor analysis with CFI values ≥ 0.95 and SRMR ≤ 0.05 , in line with the Middle-Range Theory of Self-Care of Chronic Illness (Riegel et al., 2012).

The reliability of the SC-CII is also relatively high, with Cronbach's alpha values ranging from 0.67 to 0.86 for all subscales, indicating adequate internal cohesion (Arapi et al., 2023). The SC-CII-Sp recorded very good reliability, with ICC values of 0.872–0.985 indicating measurement stability over time (Hernández-Padilla et al., 2024). The SC-CII-based Self-

Care Inventory also demonstrated internal consistency with Cronbach's alpha values of 0.85–0.88 (Luciani et al., 2022) . The SC-CII has been widely applied in various chronic disease contexts, such as hypertension, diabetes mellitus, heart failure, COPD, osteoarthritis, and chronic kidney disease. This instrument is sensitive in capturing the specific characteristics of each condition, such as a focus on healthy lifestyle in hypertension, glycemia management in diabetes, and monitoring of complex symptoms in heart failure (Arapi et al., 2023). In addition, the SC-CII allows the identification of barriers to self-care behavior, such as overlapping symptoms in patients with multimorbidity or limited social support, and perceived risk of complications (Page et al., 2022) (Lee et al., 2023) . This instrument also includes affective and interpersonal dimensions, which are important for patients with mental disorders and chronic pain, and can describe the influence of therapy burden and personal preferences on self-care decision making.

In clinical practice, SC-CII is an important evaluative tool for health workers in assessing patients' ability to carry out self-care independently. The measurement results can be used to develop targeted educational interventions based on patient needs and improve data-based therapeutic communication between patients and health care providers. In the field of research, the SC-CII has been cross-culturally validated through a *measurement invariance approach*, allowing valid comparisons of self-care behaviors across countries. The strong factorial structure and high internal reliability, as demonstrated by the study of Durán-Gómez et al. (2023) with a Cronbach's alpha value of 0.85 and an ICC of 0.92, support the SC-CII as a stable and reliable measurement tool in studies across diagnoses and heterogeneous populations. Its flexibility makes the SC-CII relevant in quantitative research with *cross-sectional*, *longitudinal*, and experimental designs. The SC-CII is a measurement tool for self-care behavior and a solid conceptual foundation for developing evidence-based nursing theory and practice. This instrument supports the global research agenda in chronic disease control through increasing self-care capacity and opening up opportunities for integrating research results into adaptive, contextual, and sustainable health policies.

CONCLUSION

The Self-Care of Chronic Illness Inventory (SC-CII) is a valid, reliable, and adaptive instrument for assessing self-care behaviors in individuals with chronic diseases. The instrument has been psychometrically tested in multiple language versions and cultural contexts, including populations with multiple chronic conditions (MCC) and diverse social backgrounds. The SC-CII self-care maintenance, monitoring, and management domains consistently demonstrate stable and theoretically relevant factor structures. The SC-CII has also been shown to be sensitive in identifying differences in self-care behaviors based on disease type, psychosocial conditions, and contextual factors such as self-efficacy, social support, and risk perception. In clinical practice, the SC-CII supports more targeted assessments, shared decision-making between patients and healthcare providers, and the development of interventions based on individual-specific needs. Meanwhile, in the research realm, the SC-CII provides a strong methodological foundation for cross-cultural, longitudinal, and experimental studies and supports the integration of results into evidence-based health policy.

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