

Development and Initial Psychometric Validation of the Self-Care of Cancer Inventory (SC-CI)

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Introduction. Cancer is increasingly managed as a chronic condition, requiring patients to undertake complex self-care behaviours. Existing oncology instruments primarily assess specific symptoms or limited dimensions of self-care and may not provide a comprehensive, theory-based evaluation. This study developed the Self-Care of Cancer Inventory (SC-CI) and evaluated its initial psychometric properties.

Methods. A psychometric validation study was conducted using baseline data from the ONCO-SHIELD longitudinal study at Careggi University Hospital, Florence. Adults with metastatic solid tumours receiving first-line systemic anticancer therapy were enrolled. The SC-CI was developed through a theory-driven process based on the Middle-Range Theory of Self-Care of Chronic Illness, including item generation, expert content validation, and cognitive interviews. Structural validity was assessed using confirmatory factor analysis (CFA), and internal consistency using McDonald's omega (ω).

Results. The study included 305 patients (mean age, 68.4 years; standard deviation, 9.53), of whom 68.2% were men. The most represented cancers were lung (28.2%), lower gastrointestinal (23.3%), and genitourinary cancers (22.0%). Content validity was high across domains (S-CVI, 0.97–0.98), and cognitive interviews supported the relevance, comprehensibility, and comprehensiveness of the items. CFA supported the multidimensional structure after minor model refinements, including removal of two self-care maintenance items and specification of theoretically justified residual covariances. The simultaneous CFA showed acceptable fit (RMSEA = 0.050; CFI = 0.925; TLI = 0.919; SRMR = 0.080). Internal consistency was adequate to good across domains (ω = 0.74–0.85).

Discussion. The SC-CI is a promising multidimensional, theory-based instrument for assessing self-care in oncology. Further studies should examine convergent and known-groups validity, confirm the refined factor structure in an independent sample, and test its performance in broader and more

diverse oncology populations.

Keywords: Self-Care, Oncology Nursing, Psychometrics

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