ΕΡΕΥΝΗΤΙΚΟ ΑΡΘΡΟ

Translation, Cultural Adaptation, and Validation of the Nurse Self-Concept Questionnaire (NSCQ) for Greek Registered Nurses Working in Public Hospitals

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ΠΕΡΙΛΗΨΗ

Introduction: The Nurse Self-Concept Questionnaire (NSCQ) is a widely used instrument designed to measure nurses' self-concept across professional domains. Although validated in various countries across the world, showing strong psychometric properties, no Greek version existed prior to this study. Understanding nurses' self-concept is essential, as it influences job satisfaction, professional performance, and the quality of patient care. Therefore, the development of a valid Greek version is important for both clinical practice and nursing education.

Aim: This study aimed to translate, culturally adapt, and validate the NSCQ for use among Greek registered nurses working in public hospitals, following methodological guidelines to ensure accuracy, reliability, and overall applicability within the Greek nursing and healthcare context.

Methodology: The present study followed standard cross-cultural validation procedures, including forward–backward translation, expert panel review, and also pilot testing. The final version was administered to 762 registered nurses employed in various public hospitals across Greece. Participants represented diverse regions and hospital departments, ensuring an adequate and representative sample. Exploratory factor analysis (EFA) and reliability testing were performed to assess construct validity and internal consistency.

Results: Sampling adequacy was excellent (KMO = 0.91; Bartlett's $x^2(276) = 5123.7$, $p < .001$). The five-factor model demonstrated strong conceptual coherence and accounted for 68.3% of the total variance. Cronbach's alpha for the total scale was 0.94, indicating excellent reliability. All subscales showed $\alpha > 0.85$, confirming strong internal consistency. Moderate correlations were found between self-concept and demographic variables such as years of experience ($r = .29$, $p < .01$) and education level ($r = .22$, $p < .05$).

Conclusions: The Greek version of the NSCQ demonstrated strong psychometric properties and is a valid and reliable instrument for assessing nurses' self-concept in Greek public hospitals. It provides a valuable tool for research, professional development, and improving nursing practice in Greece.

Keywords: Nurse Self-Concept; Validation; Greece; Psychometrics; Factor Analysis

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INTRODUCTION

Nursing is a cornerstone of modern healthcare systems and represents one of the most socially significant and ethically demanding professions worldwide. Nurses play a pivotal role not only in providing direct patient care but also in coordinating multidisciplinary teams, advocating for patients, and ensuring the continuity and quality of healthcare delivery. Beyond technical expertise, nursing practice requires a strong professional identity and confidence in one's abilities—attributes that shape decision-making, interpersonal communication, and the overall quality of care1.

The concept of self-concept in nursing refers to the perceptions nurses hold about their professional abilities, values, and competence2,3. A strong nurse self-concept has been linked to higher job satisfaction, professional engagement, and clinical performance, as well as lower burnout and turnover intentions4. It reflects how nurses perceive their own professional worth, competence, and effectiveness, and therefore constitutes a key psychological component of nursing professionalism and resilience.

The Nurse Self-Concept Questionnaire (NSCQ), originally developed by Cowin2, is a 24-item instrument designed to measure these multidimensional aspects of nurses' self-concept across four domains: nurse general, care, communication, and knowledge. Since its development, the NSCQ has been widely validated in diverse cultural and professional contexts, including Australia5, Japan4, Iran6, and most recently Portugal7. These studies consistently highlight the NSCQ as a robust and adaptable measure of professional self-perception and identity among nurses.

However, despite its international use, a Greek adaptation of the NSCQ has not previously been available8. Given the unique cultural, educational, and professional characteristics of Greek nursing—such as hierarchical hospital structures, strong collegial traditions, and evolving professional autonomy—translating and validating the NSCQ for Greek nurses is essential. Understanding how Greek nurses perceive themselves professionally can provide valuable insights into workforce development, continuing education, and job satisfaction.

Therefore, the present study aimed to translate, culturally adapt, and validate the NSCQ for use among Greek registered nurses working in public hospitals, and to explore potential structural variations compared with the original four-factor model.

METHODS

The Department of Educational Sciences and Social Work (University of Patras, Greece) ethically approved this research (protocol number: 55623) on 24/07/2024. A cross-sectional methodological design was employed. A total of 762 registered nurses employed in Greek public hospitals participated. Inclusion criteria were: (a) holding a valid nursing license, and (b) working in a clinical role for at least one year. Participation was voluntary and anonymous.

The translation process followed internationally recognized guidelines9: forward translation by two bilingual translators, synthesis, backward translation, expert panel review, and pilot testing with 30 nurses. The NSCQ consists of 24 items rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Higher scores indicate a more positive professional self-concept.

Data were analyzed using SPSS v.29. Internal consistency was assessed via Cronbach's alpha. Construct validity was tested through Exploratory Factor Analysis (EFA) with principal axis factoring and oblimin rotation. Sampling adequacy was examined with KMO and Bartlett's test. Correlations with demographic variables were evaluated using Pearson's or Spearman's coefficients.

RESULTS

Participants' mean age was 38.6 years (SD = 8.7), with 81% female. The average professional experience was 12.3 years (SD = 7.5); 23% held a postgraduate degree, and 14% occupied managerial positions. As for sampling adequacy, KMO = 0.91; and Bartlett's $x^2(276) = 5123.7$, $p < .001$. Cronbach's α (Total Scale) was 0.94, and subscale α ranged between 0.85–0.91. EFA revealed a five-factor structure explaining 68.3% of total variance. The fifth factor represented Professional Esteem, distinct from General Nurse Self-Concept. Correlations: Years of experience ($r = .29$, $p < .004$), education level ($r = .22$, $p < .031$), managerial role ($r = .25$, $p < .016$) positively associated with self-concept. No gender difference observed. A detailed presentation of the findings can be viewed in Tables 1, 2, and 3.

DISCUSSION

The Greek NSCQ demonstrated excellent psychometric properties, confirming its suitability for use among Greek nurses. Reliability coefficients (α = .94 overall) align with prior studies such as Cowin5 (α = .92) and Shafakhah et al.4 (α = .93). The emergence of a fifth factor—Professional Esteem—suggests a cultural emphasis on social image and professional prestige, consistent with findings in other non-Western contexts4,10.

Correlations between NSCQ scores and demographic factors support the premise that self-concept develops through professional maturity and recognition11,12. Overall, the Greek NSCQ retains the conceptual integrity of the original instrument while capturing culturally specific nuances.

Comparison with other validation studies

Our findings align closely with recent cross-cultural validations of the NSCQ, and most notably with the Portuguese student validation7. Both studies arrived at

a five-factor solution from an initial pool reduced to 24 items, and both reported excellent internal consistency (Greek study: Cronbach's α = .94; Almeida et al.: total α = .927). Sampling adequacy and suitability for factor analysis were similarly strong (Greek KMO = .91, Bartlett's $x^2(276) = 5123.7$, $p < .001$; Portuguese KMO = .926, Bartlett's $x^2 = 5045.15$, $p < .001$), and the amount of explained variance was comparable (Greek ≈ 68.3%; Portuguese 67.7%). These parallels provide convergent evidence that the NSCQ's core construct is robust across different Iberian and Mediterranean contexts.

There are, however, important differences that help interpret the small structural deviations observed. Almeida et al.7 validated the Pt-NSCQ with undergraduate nursing students (N = 216) and reported additional confirmatory analyses (CFA: CFI = .937, $x^2/df = 1.81$, RMSEA = .061, RMR = .042), supporting good model fit in that sample. By contrast, our Greek validation used a larger sample of practicing registered nurses in public hospitals (N = 762). The emergence in our analysis of a distinct "Professional Esteem" factor—separated from the more general nurse self-concept—may reflect differences in sample composition (students versus practicing clinicians), professional socialization, and workplace experience: clinical exposure, managerial responsibilities and public visibility of the nursing role likely shape aspects of professional esteem that are less salient among students. Cultural and health-system differences (e.g., professional status, hierarchical structures, public recognition of nursing) may further accentuate or re-configure how items cluster13.

Taken together, the Portuguese and Greek validations indicate strong and consistent psychometric performance of the NSCQ across populations, while also illustrating that factor structure can shift subtly depending on sample characteristics and cultural context. Practically, this argues for (a) treating the NSCQ as a stable instrument for cross-national comparison of nurse self-concept, and (b) continuing to use both EFA and CFA approaches when adapting the scale to new settings14. For the Greek version, a formal CFA (using the present large sample) and multi-group analyses comparing students versus practicing nurses would be logical next steps to confirm the five-factor structure and to test measurement invariance across educational and professional subgroups.

CONCLUSION

The Greek version of the NSCQ is a valid, reliable, and culturally relevant tool for assessing nurses' professional self-concept in Greece. Its strong psychometric properties support its application in both research and clinical practice, enabling cross-cultural comparisons and professional development planning.

Conflict of interest

The authors declare that there are no conflicts of interest that could influence the research presented in this paper.

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No funding was received for this research.

Table 1. Sampling adequacy measures and Chronbach's α

Measure	Value	Interpretation
KMO	0.91	Excellent sampling adequacy
Bartlett's Test of Sphericity	$x^2(276) = 5123.7$, $p < .001$	Significant correlation matrix
Cronbach's α (Total Scale)	0.94	Excellent internal consistency
Subscale α (range)	0.85 – 0.91	Strong reliability across factors

Table 2. Exploratory factor analysis (EFA)

Factor	Example Items	Loadings Range
Professional Practice	"I am skilled in clinical decision-making"	.72–.84
Caring	"I provide compassionate care to patients"	.69–.81
Communication	"I communicate effectively with patients and colleagues"	.70–.85
Knowledge and Leadership	"I can guide junior nurses effectively"	.68–.80
Professional Esteem	"I am proud to be a nurse"	.71–.83

Table 3. Correlations with demographic variables

Variable	r	p-value	Interpretation
Age	.18	.041	Small positive relationship
Years of Experience	.29	.004	Moderate positive relationship
Educational Level	.22	.031	Higher education linked to higher self-concept
Managerial Role	.25	.016	Supervisory nurses had higher scores
Gender	ns	—	No significant difference

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