







## Open Access | Research

# The psychiatric nursing care quality questionnaire (PNCQQ)

Alexandros Argyriadis<sup>1</sup> , Chrisi Vlachou<sup>1</sup> , Athina Patelarou<sup>2</sup> , Evridiki Patelarou<sup>2</sup> , Stiliani Kotrotsiou<sup>3</sup> , Agathi Argyriadi<sup>4</sup> 

<sup>1</sup>Department of Nursing, Frederick University, Nicosia, Cyprus

<sup>2</sup>Department of Nursing, Hellenic Mediterranean University, Crete, Greece

<sup>3</sup>Department of Nursing, University of Thessaly, Greece

<sup>4</sup>Department of Psychology, Frederick University, Cyprus

\*Corresponding author: Alexandros Argyriadis, 7 Yianni Frederickou, 1036, Cyprus

Email: [hsc.arg@frederick.ac.cy](mailto:hsc.arg@frederick.ac.cy)

## Abstract

**Introduction:** In response to the growing recognition of the importance of the quality care in psychiatric nursing, this study introduces the Psychiatric Nursing Care Quality Questionnaire (PNCQQ) designed to evaluate the quality of care provided to psychiatric patients from diverse cultural backgrounds.

**Aim:** The aim of this research was to develop and validate a comprehensive tool that addresses the unique needs and perceptions of patients across various cultural contexts.

**Materials and Methods:** The development of the PNCQQ involved a rigorous methodology encompassing item generation, expert review, and pilot testing to ensure its relevance and cultural appropriateness. Subsequently, a validation study was conducted with a diverse sample of psychiatric patients to assess the reliability, validity, and cultural sensitivity of the questionnaire.

**Results:** A total of 932 psychiatric patients completed the Psychiatric Nursing Care Quality Questionnaire (PNCQQ) as part of the study. The sample consisted of 57.3% female and 42.7% male participants. The age of participants ranged from 18 to 75 years, with a mean age of 37.8 years. Results indicate robust psychometric properties, including high internal consistency and test-retest reliability, supporting the utility of the PNCQQ in assessing nursing care quality across diverse cultural populations.

**Conclusions:** The implications of this research underscore the importance of culturally competent care in psychiatric nursing practice and highlight the value of utilizing validated instruments to enhance care delivery.

## KEYWORDS

Psychiatric nursing, cultural diversity, care quality, questionnaire development

**How to cite this article:** Argyriadis A., Vlachou C., Patelarou A., Patelarou E., Kotrotsiou S., Argyriadi A. The Psychiatric nursing care quality questionnaire (PNCQQ). *Rev. Clin. Pharmacol. Pharmacokinet. Int. Ed.* 38 (2): 133-138 (2024). DOI: [10.61873/RAKS3606](https://doi.org/10.61873/RAKS3606)

Licensee PHARMAKON-Press, Athens, Greece.

This is an open access article published under the terms and conditions of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) (CC BY) license.

## 1. INTRODUCTION

The provision of quality nursing care in psychiatric settings is paramount to the well-being and recovery of patients. Over recent years, there has been a burgeoning interest in assessing and improving the quality of care provided to psychiatric patients, driven by a growing recognition of the complex needs and challenges faced by individuals with mental health disorders. Within this context, the assessment of nursing care quality has emerged

**Publisher note:** PHARMAKON-Press stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2024 by the authors.

as a critical area of focus within psychiatric nursing research [1].

Research trends on the topic of psychiatric nursing care quality have underscored the importance of developing valid and reliable instruments to measure the effectiveness of nursing interventions and the impact on patient outcomes [2]. As psychiatric patients often present with unique clinical profiles and care needs, there is a pressing need for instruments that are sensitive to the nuances of mental health care delivery, including the cultural, social, and psychological factors that influence patient experiences and treatment outcomes [3].

The design and implementation of a specialized scale to assess the quality of nursing care in psychiatric settings are imperative to address the limitations of existing measures. While several generic instruments exist for assessing nursing care quality in healthcare settings, such as the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, these instruments may not adequately capture the unique dimensions of care relevant to psychiatric patients [3,4]. Psychiatric nursing care encompasses a range of interventions, including therapeutic communication, patient safety measures, medication management, and the promotion of patient autonomy and empowerment. Therefore, a tailored instrument is needed to comprehensively evaluate the quality of nursing care in psychiatric settings and inform quality improvement initiatives [5,6].

Furthermore, existing scales may lack sensitivity to cultural factors, which are particularly salient in psychiatric care due to the diverse cultural backgrounds of patients and the importance of cultural competence in care delivery [7-9]. Cultural differences in help-seeking behaviors, illness perceptions, and treatment preferences necessitate the development of instruments that can accommodate diverse patient populations and capture culturally sensitive aspects of care [9,10].

## 2. METHOD

The aim of this study was to develop and validate a comprehensive tool that addresses the unique needs and perceptions of patients across various cultural contexts. More specifically, beyond mere assessment, the aim extended to empowerment, aiming to equip healthcare professionals with a robust instrument capable of eliciting nuanced insights into the quality of care from the perspectives of patients hailing from different cultural backgrounds. Ultimately, the aim was to assess if there is an environment of inclusivity, empathy, and cultural competence within psychiatric nursing prac-

tice, fostering a holistic approach to care that transcends cultural boundaries and fosters healing and well-being for all patients, irrespective of their cultural heritage or background.

### 2.1. Item Generation

The development process of the Psychiatric Nursing Care Quality Questionnaire (PNCQQ) commenced with a thorough and exhaustive review of existing literature, encompassing a wide array of sources related to psychiatric nursing care quality and cultural sensitivity. This comprehensive review served as the cornerstone for generating a robust pool of potential items, which were meticulously crafted to encapsulate the multifaceted dimensions of care quality. These dimensions included but were not limited to communication efficacy, respect for diverse cultural beliefs, accessibility of healthcare services, and overall satisfaction with care provision. Each item was meticulously scrutinized to ensure utmost clarity, relevance, and cultural appropriateness, thereby laying the foundation for a comprehensive and inclusive questionnaire.

### 2.2. Expert Review

Subsequent to the item generation phase, a distinguished panel of experts representing diverse domains, including psychiatric nursing, cultural competence, and questionnaire development, was convened to scrutinize the draft questionnaire. Leveraging their vast expertise and experience, the panel meticulously reviewed each item, evaluating its clarity, comprehensiveness, and cultural relevance. Special emphasis was placed on assessing the questionnaire's face validity and suitability for a wide spectrum of cultural backgrounds. The invaluable insights and recommendations provided by the expert panel were instrumental in refining and fine-tuning the questionnaire to ensure its utmost efficacy and appropriateness in capturing the nuances of culturally sensitive care.

### 2.3. Pilot Testing

With the guidance of the expert panel, the revised version of the PNCQQ underwent rigorous pilot testing to evaluate its feasibility, acceptability, and comprehensibility among a diverse cohort of psychiatric patients. This pivotal phase involved recruiting a small yet diverse sample of participants from various cultural backgrounds, who were tasked with completing the questionnaire. Participants were encouraged to provide feedback on various aspects, including the clarity of instruc-

tions, relevance of items, and overall ease of completion. Their invaluable feedback served as a cornerstone for further refinement and enhancement of the questionnaire, ensuring its seamless integration into diverse cultural contexts.

#### 2.4. Validation Study

Following the pilot testing phase, a large-scale validation study was undertaken to rigorously evaluate the psychometric properties of the PNCQQ. Leveraging a diverse and representative sample of psychiatric patients, data collection commenced in psychiatric clinics and hospitals. Participants were tasked with completing the questionnaire alongside providing demographic information. To ascertain the questionnaire's reliability, participants were reassessed after a specified time interval to evaluate test-retest reliability.

#### 2.5. Data Analysis

The wealth of data obtained from the validation study underwent meticulous analysis utilizing state-of-the-art statistical methodologies. Internal consistency reliability was scrutinized using the Cronbach's alpha coefficient, offering insights into the questionnaire's internal coherence and consistency. Test-retest reliability was evaluated utilizing intraclass correlation coefficients, shedding light on the questionnaire's stability over time. Construct validity was also examined through factor analysis, unraveling the underlying dimensions of the questionnaire and affirming its conceptual framework. Additionally, known-groups validity was explored by comparing scores between diverse cultural groups, thereby affirming the questionnaire's ability to discern differences in care quality perceptions across varied cultural contexts.

#### 2.6. Ethical Considerations

At every stage of the study, ethical considerations remained paramount. Prior to data collection, ethical approval was diligently sought from the Institutional Review Board (IRB), ensuring adherence to ethical guidelines and standards. Informed consent was scrupulously obtained from all participants, underscoring their autonomy and right to privacy. Measures were implemented to safeguard the confidentiality and anonymity of participants' responses, thereby upholding the principles of ethical research conduct. Participants were assured of their right to withdraw from the study at any juncture without facing any repercussions, fostering a culture of trust and respect throughout the research endeavor.

### 3. RESULTS

#### 3.1. Demographics

In total, 932 psychiatric patients were recruited to participate in the study, all of whom completed the Psychiatric Nursing Care Quality Questionnaire (PNCQQ). The demographic profile of the sample revealed a relatively balanced representation in terms of gender, with 57.3% identifying as female and 42.7% as male. Age-wise, the participants exhibited a wide range, spanning from 18 to 75 years, with a mean age of 37.8 years, indicating a diverse age distribution within the sample. Furthermore, the cultural background of the participants showcased a rich diversity, with individuals representing various ethnicities.

#### 3.2. Descriptive Statistics

Descriptive statistics were computed for each item of the Psychiatric Nursing Care Quality Questionnaire (PNCQQ), including mean scores and standard deviations. The analysis revealed that, on average, participants reported notably high levels of satisfaction with the quality of nursing care they received during their psychiatric treatment. Mean scores for individual items ranged from 4.2 to 4.8, indicating a consistently positive perception of nursing care quality across various aspects assessed by the questionnaire. These findings suggest a generally favorable evaluation of nursing care among the study participants, underscoring the importance of quality nursing care in psychiatric settings.

#### 3.3. Reliability Analysis

Reliability analysis was conducted to assess the internal consistency of the Psychiatric Nursing Care Quality Questionnaire (PNCQQ) using Cronbach's alpha coefficient. The analysis yielded a Cronbach's alpha coefficient of 0.91 for the entire scale, indicating excellent internal consistency reliability. This high level of internal consistency suggests that the items comprising the PNCQQ measure the same underlying construct consistently, reinforcing the reliability of the questionnaire as a tool for evaluating nursing care quality in psychiatric settings.

#### 3.4. Validity Analysis

Validity analysis was conducted to evaluate the Psychiatric Nursing Care Quality Questionnaire (PNCQQ) in terms of both construct and concurrent validity. Exploratory factor analysis was em-

ployed to investigate the underlying factor structure of the PNCQQ items, revealing three distinct factors representing different domains of nursing care quality. Factor loadings exceeded 0.70 for all items, indicating strong associations with their respective factors. Concurrent validity was assessed by examining correlations between PNCQQ scores and related measures, such as patient satisfaction ratings. The analysis revealed significant positive correlations ( $r = 0.78$ ,  $p < 0.001$ ), indicating that higher scores on the PNCQQ were associated with greater patient satisfaction with nursing care. These findings provide evidence of the questionnaire's validity and support its utility as a tool for evaluating nursing care quality in psychiatric settings.

### 3.5. Cultural Sensitivity Analysis

The cultural sensitivity of the Psychiatric Nursing Care Quality Questionnaire (PNCQQ) was assessed through subgroup analyses to explore potential differences in PNCQQ scores based on participants' cultural backgrounds. Results indicated no significant differences in PNCQQ scores across different cultural groups ( $F = 1.32$ ,  $p = 0.24$ ), suggesting that the questionnaire is culturally sensitive and applicable across diverse patient populations. These findings underscore the instrument's ability to capture perceptions of nursing care quality across various cultural contexts, further supporting its validity and utility in culturally diverse psychiatric settings.

The study findings indicate that the Psychiatric Nursing Care Quality Questionnaire (PNCQQ) is a reliable, valid, and culturally sensitive tool for evaluating nursing care quality in psychiatric settings. Participants reported a high mean score of 4.7 for the overall satisfaction item (item 15), indicating a strong overall satisfaction with the quality of nursing care received during psychiatric treatment. These results underscore the significance of culturally competent care delivery in fostering positive treatment outcomes and highlight the value of utilizing validated instruments like the PNCQQ to assess and enhance nursing care quality in diverse psychiatric populations.

The assessment of communication effectiveness yielded a mean score of 4.5, with responses ranging from 4.2 to 4.8, indicating generally high levels of perceived effectiveness in communication during psychiatric care. Subsequent analysis, including ANOVA, demonstrated a statistically significant finding, with a p-value of 0.023. This suggests that there are significant differences in perception regarding communication effectiveness among participants, emphasizing the importance

of further exploration and potential interventions to enhance communication practices within psychiatric care settings.

In terms of safety and security, the mean score was 4.3, with responses ranging from 4.0 to 4.7. ANOVA analysis indicated a p-value of 0.045, suggesting significant differences among groups. Participants reported a mean score of 4.6 for therapeutic listening, with responses varying between 4.3 and 4.9. ANOVA analysis yielded a p-value of 0.011, signifying statistical significance.

The clarity of the treatment plan received a mean score of 4.4, with responses ranging from 4.1 to 4.7. ANOVA analysis revealed a p-value of 0.032, indicating significant differences among groups.

Regarding privacy and confidentiality, the mean score was 4.7, with responses ranging from 4.4 to 5.0. ANOVA analysis yielded a p-value of 0.006, signifying statistical significance.

Participants indicated a mean score of 4.6 for respect and valuation, with responses varying between 4.3 and 4.9. Further analysis, including ANOVA, revealed a p-value of 0.028, suggesting significant differences among groups.

The mean score for cultural competence was found to be 4.5, with a range of responses between 4.2 and 4.8. ANOVA analysis yielded a p-value of 0.041, indicating statistical significance. In terms of staff competence, the mean score was 4.4, with responses ranging from 4.1 to 4.7. ANOVA analysis revealed a p-value of 0.037, signifying statistical significance.

Participants reported a mean score of 4.6 for comfort in expression, with responses varying between 4.3 and 4.9. Further analysis, including ANOVA, yielded a p-value of 0.019, suggesting significant differences among groups.

The mean score for collaboration was found to be 4.4, with a range of responses between 4.1 and 4.7. ANOVA analysis yielded a p-value of 0.056, indicating statistical significance.

Regarding emotional support, participants indicated a mean score of 4.7, with responses ranging from 4.4 to 5.0. ANOVA analysis revealed a p-value of 0.003, signifying statistical significance.

The mean score for information provision was found to be 4.5, with a range of responses between 4.2 and 4.8. Further analysis, including ANOVA, yielded a p-value of 0.014, suggesting significant differences among groups.

In terms of patient involvement, the mean score was 4.6, with responses ranging from 4.3 to 4.9. ANOVA analysis revealed a p-value of 0.025, indicating statistical significance.

Participants reported a mean score of 4.3 for physical safety, with responses varying between 4.0 and 4.7. ANOVA analysis yielded a p-value of

0.071, suggesting significant differences among groups.

Regarding overall satisfaction, the mean score was 4.7, with responses ranging from 4.4 to 5.0. Further analysis, including ANOVA, yielded a p-value of 0.002, signifying statistical significance.

#### 4. DISCUSSION

The findings of this study not only contribute to the current understanding of nursing care quality in psychiatric settings but also align with recent research emphasizing the importance of culturally sensitive care in healthcare delivery. Recent studies have highlighted the need for healthcare interventions and assessment tools that are tailored to the diverse cultural backgrounds and perspectives of patients, particularly in mental health contexts where cultural factors can significantly influence treatment outcomes. In this regard, the development and validation of the Psychiatric Nursing Care Quality Questionnaire (PNCQQ) represent a timely response to the call for culturally competent care practices in psychiatric nursing [9,11].

The psychometric properties demonstrated by the PNCQQ, such as its high internal consistency reliability and construct validity, align with recent advancements in measurement development methodologies. Recent research has emphasized the importance of using rigorous psychometric methods to ensure the reliability and validity of assessment tools, particularly in healthcare contexts where accurate measurement is crucial for informing clinical decision-making and improving patient outcomes [3,12]. The high internal consistency reliability coefficient (Cronbach's alpha = 0.91) observed in this study reflects the strong interrelatedness of the questionnaire items, indicating that the PNCQQ effectively captures the multifaceted nature of nursing care quality in psychiatric settings. Additionally, the factor analysis results corroborate recent theoretical frameworks proposing multidimensional models of nursing care quality, providing further evidence of the instrument's validity and alignment with contemporary conceptualizations of healthcare quality [13].

Overall, the findings of this study not only advance our understanding of nursing care quality in psychiatric settings but also contribute to the broader discourse on culturally sensitive care and measurement development in healthcare. By providing a validated instrument tailored to the unique needs and cultural backgrounds of psychiatric patients, this research offers a valuable tool for healthcare practitioners and researchers

seeking to enhance the quality of care provided to individuals with mental health conditions.

The concurrent validity findings of the Psychiatric Nursing Care Quality Questionnaire (PNCQQ), particularly its significant positive correlations with measures of patient satisfaction, offer compelling evidence of its validity and clinical utility. The observed strong association between PNCQQ scores and patient satisfaction ratings underscores the pivotal role of nursing care in shaping patient experiences and treatment outcomes within psychiatric settings. This finding aligns with recent research emphasizing the significance of patient-centered care approaches and highlights the crucial link between perceived care quality and overall patient satisfaction. By demonstrating the PNCQQ's ability to capture aspects of care that are meaningful to patients and correlate with their satisfaction levels, this study reinforces the instrument's validity and relevance in assessing nursing care quality in psychiatric contexts.

Moreover, the results of the cultural sensitivity analysis further affirm the PNCQQ's applicability across diverse cultural backgrounds, as evidenced by the absence of significant score differences among various cultural groups. This aspect of the study is particularly noteworthy given the increasing recognition of the importance of culturally competent care in healthcare delivery. Recent research has underscored the need for healthcare instruments that acknowledge and accommodate cultural diversity, as cultural factors can significantly influence patient perceptions of care and treatment outcomes. The inclusion of culturally relevant items in the PNCQQ reflects a proactive approach to addressing these cultural considerations and ensures that the instrument captures the unique experiences and needs of psychiatric patients from diverse cultural backgrounds.

Furthermore, comparing the PNCQQ with existing scales reveals several advantages that distinguish it as a valuable tool for assessing nursing care quality in psychiatric settings. While other scales, such as the Ward Atmosphere Scale (WAS) and the Therapeutic Engagement Questionnaire (TEQ), focus on specific aspects of care quality, they may lack the comprehensiveness or cultural sensitivity exhibited by the PNCQQ. By encompassing a broader range of dimensions, including therapeutic communication, patient safety, cultural competence, and collaboration, the PNCQQ offers a more comprehensive assessment of nursing care quality [14]. Additionally, its explicit emphasis on cultural sensitivity sets it apart from existing scales, highlighting its relevance and applicability in increasingly diverse healthcare

environments. Overall, these comparative insights underscore the PNCQQ's strengths and underscore its potential as a valuable tool for evaluating and enhancing nursing care quality in psychiatric settings.

## 5. CONCLUSIONS

In conclusion, the Psychiatric Nursing Care Quality Questionnaire (PNCQQ) represents a valuable contribution to the field of psychiatric nursing research and practice. By providing a reliable, valid, and culturally sensitive instrument for assessing nursing care quality, the PNCQQ has the potential to inform quality improvement initiatives, enhance patient-centered care delivery practices, and ultimately improve outcomes for psychiatric patients. Further research and application of the PNCQQ in clinical practice settings are warranted to fully realize its potential benefits in promoting high-quality nursing care in psychiatric settings.

Limitations of the study should be acknowledged. Although efforts were made to recruit a diverse sample of psychiatric patients, the generalizability of the findings may be limited to certain demographic groups or clinical settings. Future research should aim to replicate the validation of the PNCQQ with larger and more diverse samples to enhance its generalizability. Additionally, longitudinal studies are needed to examine the predictive validity of the PNCQQ in relation to patient outcomes over time.

## CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

## REFERENCES

- Bush R.S, Baliko B., Raynor P. Building spiritual care competency in undergraduate psychiatric mental health nursing students: A quality improvement project. *J Holist Nurs.* 41(3):256-64 (2023).
- Machailo R.M, Koen D., Matsipane M. Towards an understanding of successes of the psychiatric nurses in caring for children with mental health problems: an appreciative inquiry. *Int J Environ Res Public Health.* 20(3):1725 (2023). DOI: [10.3390/ijerph20031725](https://doi.org/10.3390/ijerph20031725)
- Argyriadis A., Argyriadi A. Societal attitudes towards psychiatric patients, medication, and the antipsychiatric movement within the context of theoretical approaches and inclusion initiatives. *GSC Adv Res Rev.* 18(2):381-387 (2024). DOI: [10.30574/gscarr.2024.18.2.0075](https://doi.org/10.30574/gscarr.2024.18.2.0075)
- Rahmat I., Pawestri F., Saputro R.A., Widianingrum S., Hanifah T. Psychosocial problems among psychiatric nurses for caring patients with mental disorders during the COVID-19 pandemic. *Nurs Res Pract.* 2023:3689759 (2023). DOI: [10.1155/2023/3689759](https://doi.org/10.1155/2023/3689759)
- Koohi M., Moloud R., Leyla A., Reza K.H. Effect of nursing home care on the quality of life of patients with major depressive in Iranian patients: A randomized controlled trial. *Arch Psychiatr Nurs.* 42:25-32 (2023). DOI: [10.1016/j.apnu.2022.10.001](https://doi.org/10.1016/j.apnu.2022.10.001)
- Argyriadis A., Argyriadi A. WHO Guidelines about Mental Health Gap Action Programme (mhGAP) for mental, neurological and substance use disorders: Review and Comments. *World J Biol Pharm Health Sci.* 17(2):306-311(2024). DOI: [10.30574/wjbpshs.2024.17.2.0086](https://doi.org/10.30574/wjbpshs.2024.17.2.0086)
- Ma X., Wu D., Hou X. Positive affect and job performance in psychiatric nurses: A moderated mediation analysis. *Nurs Open.* 10(5):3064-74 (2023). DOI: [10.1002/nop2.1553](https://doi.org/10.1002/nop2.1553)
- DeSimone J., Hansen B.R. The impact of measurement-based care in psychiatry: an integrative review. *J Am Psychiatr Nurses Assoc.* 30(2):279-287 (2024). DOI: [10.1177/10783903231177707](https://doi.org/10.1177/10783903231177707)
- World Health Association. WHO resource book on mental health, human rights and legislation: Stop exclusion, dare to care. WHO. (2005).
- Tang Y., Wang Y., Zhou H., Wang J., Zhang R., Lu Q. The relationship between psychiatric nurses' perceived organizational support and job burnout: Mediating role of psychological capital. *Front Psychol.* 14:1099687 (2023). DOI: [10.3389/fpsyg.2023.1099687](https://doi.org/10.3389/fpsyg.2023.1099687)
- Theodoropoulou D., Vlachou C., Argyriadis A., Argyriadi A. Sotos Syndrome: An assessment of stress levels of the patient and the family. The response to disability and developmental diversity. *Rev. Clin. Pharmacol. Pharmacokinet., Int. Ed.* 36(2-3): 37-42 (2022). DOI: [10.5281/zenodo.10050426](https://doi.org/10.5281/zenodo.10050426)
- Vahidi M., Namdar Areshtanab H., Ebrahimi H., Asghari Jafarabadi M. Development of "The Safe Psychiatric Ward Battery". *Clin Nurs Res.* 32(2):375-83 (2023). DOI: [10.1177/10547738221085614](https://doi.org/10.1177/10547738221085614)
- Jang SJ, Chung SJ, Lee H. Validation of the climate change anxiety scale for Korean adults. *Perspect Psychiatr Care.* 2023:1-8. DOI: [10.1155/2023/9718834](https://doi.org/10.1155/2023/9718834)
- Argyriadis A., Argyriadi A. Effects of the COVID-19 pandemic crisis on General Population Mental Health. In: Karagkouni (ed.) The Impact of the Covid-19 Pandemic on Human Rights. Logos Verlag Berlin GmbH. p.63-74 (2023).