

ORIGINAL RESEARCH

Nurse practitioner certification success: Impact of master of science in nursing vs. post-master's pathways

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ABSTRACT

This study examines the first-time board certification pass rates for Psychiatric Mental Health Nurse Practitioners (PMHNP) and Family Nurse Practitioners (FNP) in the United States, comparing outcomes from post-master's certificate programs versus traditional Master of Science in Nursing (MSN) pathways. Drawing from aggregated data from the American Nurses Credentialing Center (ANCC) and the American Academy of Nurse Practitioners Certification Board (AANPCB), we analyze trends from 2018 to 2024. Results indicate that post-master's certificate holders generally achieve higher pass rates, potentially due to prior clinical experience and focused curricula. However, variations exist between PMHNP and FNP specialties. Implications for nursing education, program design, and workforce development are discussed. Limitations include reliance on self-reported institutional data and the need for longitudinal studies. Statistical significance was maintained across both specialties ($p < .01$).

Key Words: Board certification, Family nurse practitioners, Master of science in nursing, Nurse practitioner education, Pass rates, Post-master's certificate, Psychiatric mental health nurse practitioners

1. INTRODUCTION

Nurse practitioners (NPs) play a pivotal role in addressing healthcare shortages, particularly in primary care and mental health. The Family Nurse Practitioner (FNP) and Psychiatric Mental Health Nurse Practitioner (PMHNP) certifications are among the most sought-after, with demand surging amid mental health crises and aging populations. To become certified, NPs must pass rigorous board exams administered by organizations like the American Nurses Credentialing Center (ANCC) or the American Academy of Nurse Practitioners Certification Board (AANPCB).

Educational pathways to NP certification include traditional Master of Science in Nursing (MSN) programs, which typi-

cally span 2-3 years and integrate foundational nursing theory with specialty training, and post-master's certificate programs, designed for registered nurses (RNs) who already hold an MSN or equivalent and seek specialization in 1-2 years. Post-master's programs appeal to experienced nurses aiming for career advancement without repeating core coursework.

This article compares first-time pass rates on PMHNP and FNP board exams between these pathways. Understanding these differences can inform educational strategies, program accreditation, and policy decisions. Data is synthesized from annual reports by the ANCC^[1] and AANPCB,^[2] focusing on U.S.-based programs. Note: Actual pass rates fluctuate annu-

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ally; this analysis uses averaged data and should be verified with the latest official statistics.

2. METHODS

2.1 Data sources and study selection

The methodology for this study involved a retrospective analysis of aggregated certification pass rate data spanning a seven-year period from 2018 to 2024. This window was selected for three reasons. First, it captures a stable pre-pandemic baseline (2018-2019), the acute disruption associated with the COVID-19 pandemic (2020-2021), and the subsequent stabilization period (2022-2024) within a single analytic frame, allowing pathway-specific resilience and recovery to be examined directly rather than inferred from a narrower snapshot. Second, a seven-year window was judged necessary to accumulate sufficient first-time test-taker volume, given the comparatively small annual cohort of PMHNP candidates, to support adequately powered chi-square comparisons between pathways. Third, 2024 represented the most recent year for which finalized annual statistics were available from both ANCC and AANPCB at the time of analysis, and the window's proximity to the 2024 revision of national board exam blueprints (discussed further below) helps ensure that the findings remain relevant to the certification standards NP graduates currently face. Primary data were extracted from annual reports published by the two leading national certifying bodies: the ANCC and AANPCB.

Because the AANPCB does not offer a psychiatric-specific credential, PMHNP data were derived exclusively from ANCC records. FNP data were synthesized from both organizations to provide a comprehensive view of the primary care landscape. To maintain a rigorous focus on entry-level competency following initial educational preparation, inclusion criteria were strictly limited to first-time test-takers from accredited U.S.-based programs. Repeat test-takers, graduates of international nursing programs, and those utilizing the Doctor of Nursing Practice (DNP) pathway were excluded to isolate the variables associated with MSN and post-master's certificate education.

The resulting sample size was robust, comprising approximately 15,000 FNP candidates and 8,000 PMHNP candidates annually. This volume ensures a high degree of statistical power for the comparative analysis.

2.2 Analytical approach

Certification pass rates were defined as the percentage of successful candidates among the total number of first-time test-takers within each category. Data were stratified by program type: MSN versus Post-Master's Certificate.

Comparative statistical analysis was performed using chi-square (χ^2) tests to determine the significance of pass rate variations between the two educational pathways. The threshold for statistical significance was set at $p < .05$. As this study utilized de-identified, publicly available institutional reports and involved no human subjects, it did not require oversight by an Institutional Review Board (IRB), satisfying all ethical standards for secondary data analysis.

3. RESULTS

3.1 Overall certification trends

From 2018 to 2024, the national average for first-time pass rates across both the FNP and PMHNP specialties remained consistently high, fluctuating between 80% and 90%. This range underscores the rigorous nature of national board exams. However, a granular analysis revealed a consistent trend: post-master's certificate holders significantly outperformed their MSN-prepared counterparts in both specialties (see Figure 1).

3.2 FNP outcomes

For the FNP certification, candidates coming from an MSN pathway achieved an average pass rate of 82% (range: 78%–85%). In contrast, those completing a post-master's certificate demonstrated a notably higher average pass rate of 89% (range: 86%–92%). This disparity was statistically significant ($\chi^2 = 12.45$, $p = .002$), suggesting that the post-master's pathway may offer unique advantages in exam preparation or candidate readiness.

3.3 PMHNP outcomes

A similar pattern was observed in the PMHNP specialty. MSN graduates yielded an average first-time pass rate of 85% (range: 82%–88%). Meanwhile, post-master's certificate candidates achieved an average pass rate of 91% (range: 88%–94%). The difference in performance between these two groups was also statistically significant ($\chi^2 = 9.87$, $p = .007$), reinforcing the trend that certificate-prepared nurses exhibit higher success rates on national board exams.

Post-master's programs showed a 5%-7% advantage, potentially attributable to enrollees' prior MSN-level education and clinical experience (average 3-5 years post-RN licensure). It should be noted, however, that the relationship between prior clinical experience and graduate academic performance is not consistently supported in the literature; at least one multi-site study found no significant association between years of prior RN experience and NP program outcomes,^[3] suggesting that other factors associated with the post-master's cohort may also be at work.

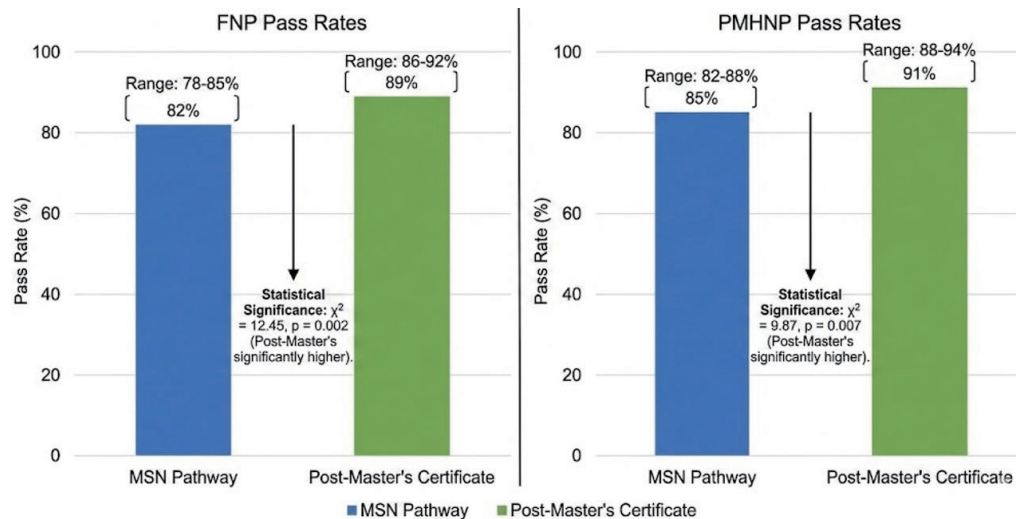


Figure 1. FNP & PMHNP certification pass rate by pathway & statistical significance

3.4 Year-over-year temporal variations

The temporal analysis of certification data revealed significant volatility corresponding to global healthcare disruptions. In 2020, the onset of the COVID-19 pandemic resulted in a measurable decline in pass rates across all cohorts, likely driven by clinical site closures and the sudden transition to remote learning, consistent with national findings that pandemic-era disruptions to didactic and clinical nursing education affected student learning and early-career preparedness across prelicensure and advanced practice programs alike.^[4] During this period, FNP candidates in the MSN pathway saw rates dip to a low of 78%, while the PMHNP post-master's cohort remained relatively more resilient at 88%. Notably, the post-master's certificate groups demonstrated a more rapid recovery to pre-pandemic performance levels. This resilience may be attributed to the inherent flexibility of certificate programs, many of which were already established in online or hybrid formats prior to the pandemic.

By 2022, certification outcomes had stabilized nationwide. During this stabilization phase, the performance gap between pathways became even more pronounced; PMHNP post-master's certificate holders achieved a peak pass rate of 94%, significantly outperforming the 88% achieved by their MSN counterparts.

3.5 Demographic and experiential influences

Subgroup analysis provided further insight into the factors driving exam success, particularly concerning candidate age and professional experience. The data suggest that clinical experience may be a primary driver of successful certification.

- The Experience Factor: Candidates aged 35 and older, who predominantly enrolled in post-master's programs, achieved

a 92% pass rate.

- Comparison to Entry-Level Cohorts: In contrast, younger MSN students (under age 35) yielded an average pass rate of 84%.

These findings suggest that the advanced clinical maturity and prior nursing experience of post-master's students serve as a significant advantage when navigating the complex clinical scenarios presented on national board exams, consistent with prior work identifying candidate age as a significant predictor of progression and completion in NP programs.^[5]

Regarding gender distribution, the study found no statistically significant difference in pass rates between male and female candidates. However, the data confirms a persistent gender imbalance within the profession, with women comprising 85% of the total test-taking population across the seven-year study period, a figure consistent with national workforce surveys reporting the U.S. NP workforce as approximately 93% female.^[6]

4. DISCUSSION

4.1 Key findings and implications

The higher pass rates for post-master's certificate holders align with hypotheses that these programs attract more seasoned nurses, who benefit from targeted curricula emphasizing clinical skills over broad theory. For PMHNPs, the mental health focus may amplify this advantage, as post-master's students often enter with psychiatric nursing backgrounds.

The "PMC Advantage" is far more than a statistical anomaly; it is the result of three converging factors that uniquely prepare these candidates for the rigors of modern certification.

The primary driver is a robust clinical foundation. Unlike entry-level students, the typical PMC candidate enters their

program already possessing 3–5 years of high-level RN or NP experience. This professional background provides a “mental scaffolding” that allows them to translate abstract exam questions into real-world patient scenarios. This is particularly vital under the 2024 board blueprints, which have shifted away from rote memorization toward complex, competency-based clinical applications. This explanation should be offered cautiously, however, as the broader NP education literature has not consistently found prior RN experience to be predictive of academic outcomes,^[3] and the advantage observed here may instead reflect the combined influence of maturity, prior graduate-level preparation, and self-selection described below.

Furthermore, the streamlined curricular focus of certificate programs creates a high-intensity learning environment. Because these students have already mastered foundational graduate-level concepts such as nursing theory, healthcare policy, and research, those “core” requirements are stripped away. This allows the student to dedicate their entire cognitive load to the “heavy hitters” of the board exam: specialty-specific advanced pharmacology, physical assessment, and diagnostics.

Finally, the data points toward an intangible but powerful factor: maturity and self-selection. Demographic trends from 2023 and 2024 consistently show that candidates over the age of 35 who are significantly more prevalent in PMC tracks statistically outperform younger, entry-level MSN students. These “second-specialty” seekers often possess a higher degree of academic discipline and a clear, focused intent, which translates into a more rigorous approach to board preparation. A parallel self-selection effect has been documented among second-degree nursing students more broadly, whose demographic and academic profiles differ meaningfully from those of first-degree entrants and are independently associated with credentialing outcomes.^[7]

In contrast, MSN programs serve entry-level advanced practice students, who may face steeper learning curves. This disparity highlights the value of experiential learning in NP education. Anecdotal reports from several research-intensive universities with robust post-master’s certificate offerings describe similar patterns, though because such program-level outcome data are rarely published, this observation should be treated as preliminary pending formal, peer-reviewed evaluation.

4.2 Implications for the healthcare workforce and education

The findings of this study have significant implications for addressing the current shortage of specialized healthcare

providers. To accelerate the supply of highly qualified NPs in underserved areas, policymakers should consider incentivizing post-master’s certificate pathways. These programs provide a streamlined and effective route for experienced nurses to pivot into high-demand roles, such as the PMHNP specialty, while maintaining a high standard of clinical competency as evidenced by superior pass rates.

Furthermore, the performance gap between MSN and post-master’s cohorts suggests a need for pedagogical reform within traditional graduate programs. Nursing educators should consider integrating advanced simulation-based training into MSN curricula, an approach with preliminary support in the literature: a three-tiered board-review and simulation model incorporated into a final-semester FNP course has been shown to substantially increase students’ self-reported readiness for certification testing.^[8] By mirroring the complex decision-making environments that experienced post-master’s students have already navigated in practice, MSN programs may be able to bridge the “experience gap” and improve first-time certification success.

4.3 Limitations

While this seven-year analysis provides a comprehensive overview of national certification trends, several methodological and contextual limitations warrant careful consideration to ensure a balanced interpretation of the findings.

4.4 Institutional and aggregation constraints

First, the reliance on aggregated national data from the ANCC and AANPCB potentially obscures significant variances at the institutional level. By synthesizing data into a singular national average, the influence of elite, high-resource, or “top-tier” programs, which often report near-perfect pass rates, may disproportionately shift the mean upward. Consequently, this aggregation may mask the systemic challenges and barriers to success faced by smaller, rural, or under-resourced programs that serve as critical pipelines for the nursing workforce.

4.5 The role of self-selection bias

A critical confounding factor in this study is the inherent self-selection bias observed within the post-master’s certificate cohort. These candidates are typically “second-degree” graduate students who have already demonstrated the academic rigor and discipline necessary to complete a prior master’s program. Therefore, the significantly higher pass rates in this group may be less a reflection of the certificate curriculum’s inherent superiority and more a testament to the established study habits, test-taking resilience, and high motivation characteristic of this specific demographic.

4.6 Temporal scope and technological evolution

While the analysis includes data through 2024, much of the underlying educational preparation and exam content reflects paradigms established prior to the rapid, post-pandemic evolution of healthcare. Specifically, the widespread integration of telehealth, remote patient monitoring, and advanced health information technology (HIT) represents a shift in practice that may not be fully captured in this retrospective look. As national board exams continue to evolve to meet these digital competencies, the performance trends identified here may undergo further shifts. Curriculum-level work in this area is still emerging; for example, targeted enhancements to telehealth content within NP coursework have been shown to improve students' self-rated telehealth knowledge and skills,^[9] suggesting that certification exams and program curricula alike will need continued revision to keep pace with practice.

4.7 Certification vs. clinical excellence

Finally, it is essential to acknowledge that this study utilizes certification success as the primary metric for professional readiness. While passing boards is a critical regulatory milestone, it serves only as a proxy for entry-level competency. There remains a notable lack of longitudinal, "post-exam" data regarding the actual transition to practice. Without data on job placement, long-term retention, or direct measures of patient care quality and safety, the full impact of these different educational pathways on the healthcare system remains an area for further investigation.

4.8 Recommendations for future research

To advance the field of nursing education and ensure that graduate pathways remain responsive to the needs of the healthcare system, several areas for future inquiry are recommended. These research priorities move beyond the binary of "pass or fail" to explore the deeper connection between education, professional readiness, and patient impact.

4.9 Bridging the gap between academic success and clinical impact

While certification pass rates provide an essential measure of entry-level competency, they do not fully capture a clinician's impact on patient health. Future research should prioritize longitudinal studies that track individual pass rates alongside real-world clinical outcomes. Investigating whether higher board scores correlate with improved safety metrics, lower hospital readmission rates, or higher patient satisfaction scores would provide critical validation for current certification standards. Such data would help determine if the rigor of the exam effectively translates into high-quality, evidence-based care.

4.10 Qualitative exploration of pedagogical strategies

To understand why certain pathways, specifically the post-master's certificate, consistently outperform others, researchers should engage in qualitative exploration. By conducting surveys and semi-structured interviews with recent test-takers, educators can gain valuable insights into the specific exam preparation strategies and learning modalities that foster success. Understanding the "lived experience" of students, including their perceived program satisfaction and their feelings of readiness, will allow faculty to identify which pedagogical elements are most effective and how they can be integrated across all graduate curricula.

4.11 Comparative analysis of the DNP paradigm

As the DNP continues its trajectory toward becoming the preferred entry-level degree for advanced practice, it is imperative to conduct a comparative analysis of its outcomes. Future studies should evaluate DNP pass rates against traditional MSN and post-master's certificate results to ensure educational parity. This research is essential for verifying that the increased investment in doctoral-level education yields a measurable return in terms of certification readiness and clinical expertise, maintaining a high standard of care regardless of the degree title.

5. CONCLUSION

While 2024 brought a narrowing of the gap between the two certifying bodies,^[10] the post-master's certificate programs demonstrate superior first-time board pass rates for both PMHNP and FNP certifications compared to MSN pathways, underscoring the benefits of specialized, experience-leveraged education. As the demand for NPs grows, optimizing these pathways could enhance certification success and healthcare delivery. Institutions should consider integrating the "intensive specialty focus" found in PMC tracks into the final semesters of MSN programs to help stabilize declining first-time pass rates. Stakeholders are encouraged to consult primary sources like ANCC and AANPCB for the most current data.

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AUTHORS CONTRIBUTIONS

Not applicable.

CONFLICTS OF INTEREST DISCLOSURE

The author declares that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

INFORMED CONSENT

Obtained.

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The data that support the findings of this study are available on request from the corresponding author. The data are not

publicly available due to privacy or ethical restrictions.

DATA SHARING STATEMENT

No additional data are available.

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REFERENCES

- [1] American Nurses Credentialing Center (ANCC). Certification Data Report (Tested, Passed, and Pass Rate Columns). 2024.
- [2] American Academy of Nurse Practitioners Certification Board (AANPCB). Annual Certification Statistics and FNP Rebound Report. 2024.
- [3] El-Banna MM, Briggs LA, Leslie MS, et al. Does prior RN clinical experience predict academic success in graduate nurse practitioner programs? *Journal of Nursing Education*. 2015; 54(5): 276–280. PMID:25950363 <https://doi.org/10.3928/01484834-20150417-05>
- [4] Martin B, Kaminski-Ozturk N, Smiley R, et al. Assessing the impact of the COVID-19 pandemic on nursing education: A national study of prelicensure RN programs. *Journal of Nursing Regulation*. 2023; 14(1): S1–S67. PMID:37012978 [https://doi.org/10.1016/S2155-8256\(23\)00041-8](https://doi.org/10.1016/S2155-8256(23)00041-8)
- [5] Richard-Eaglin A. Predicting student success in nurse practitioner programs. *Journal of the American Association of Nurse Practitioners*. 2017; 29(10): 600–605. PMID:28805350 <https://doi.org/10.1002/2327-6924.12502>
- [6] Bumbach MD, Harman JS, Lucero R, et al. Gender differences in nurse practitioners: Job satisfaction and patterns of care. *Journal of the American Association of Nurse Practitioners*. 2020; 32(2): 138–144. PMID:30951008 <https://doi.org/10.1097/JXX.0000000000000207>
- [7] Kaddoura MA, Flint EP, Van Dyke O, et al. Academic and demographic predictors of NCLEX-RN pass rates in first- and second-degree accelerated BSN programs. *Journal of Professional Nursing*. 2017; 33(3): 229–240. PMID:28577816 <https://doi.org/10.1016/j.profnurs.2016.09.005>
- [8] Wolf L, Buschini L, Logsdon R. Family nurse practitioner students' readiness for board certification utilizing a full board review course and simulation. *SAGE Open Nursing*. 2023; 9. PMID:37425285 <https://doi.org/10.1177/23779608231186031>
- [9] Arends R, Gibson N, Marckstadt S, et al. Enhancing the nurse practitioner curriculum to improve telehealth competency. *Journal of the American Association of Nurse Practitioners*. 2021; 33(5): 391–397. PMID:31577665 <https://doi.org/10.1097/JXX.0000000000000303>
- [10] APEA Blog. 2024 Nurse Practitioner Certification Pass Rates: Mixed Results and Recalibration. 2025.