

## RESEARCH BRIEF:

### *Understanding the Preparation Needs of Post-Graduation and Pre-NCLEX Examinees*



*Following the completion of any nursing program is a critical period during which future nurses are faced with studying for and passing the NCLEX. Each year, tens of thousands of nursing school graduates do not pass the NCLEX and a better understanding of this post-graduation and pre-NCLEX population will help prepare examinees. This paper outlines a survey of 32,665 post-graduation and pre-NCLEX passing potential future nurses. Results highlight opportunities to build confidence across several nursing content areas. Additionally, content areas are assessed as predictors of NCLEX anxiety. Program and policy implications are discussed.*

## INTRODUCTION

The 2011 National Council of State Boards of Nursing report on NCLEX pass rates indicates that approximately 67,000 people failed their examination. Although an effective licensure examination needs to screen out underprepared and under-qualified professionals, each instance of failure on the NCLEX represents one fewer nurse in an already understaffed profession. There are a variety of potential reasons for NCLEX failure. However, the effective design of curricula and the availability of adequate test preparation are both actionable steps needed to prepare students for success on the NCLEX.

In order to create targeted course content and preparatory materials, an accurate gauge of general content familiarity is needed. Furthermore, as types of test anxiety have repeatedly been linked to test performance (e.g., Cassady & Johnson, 2002), it is important to identify which content areas represent the greatest contribution to examinees' NCLEX anxiety. As such, the following research questions will be explored in this paper:

- *What are the confidence levels across nursing content areas for post-graduation & pre-NCLEX examinees?*
- *What content areas see the largest differences in confidence for 1<sup>st</sup> time vs. repeat NCLEX examinees?*

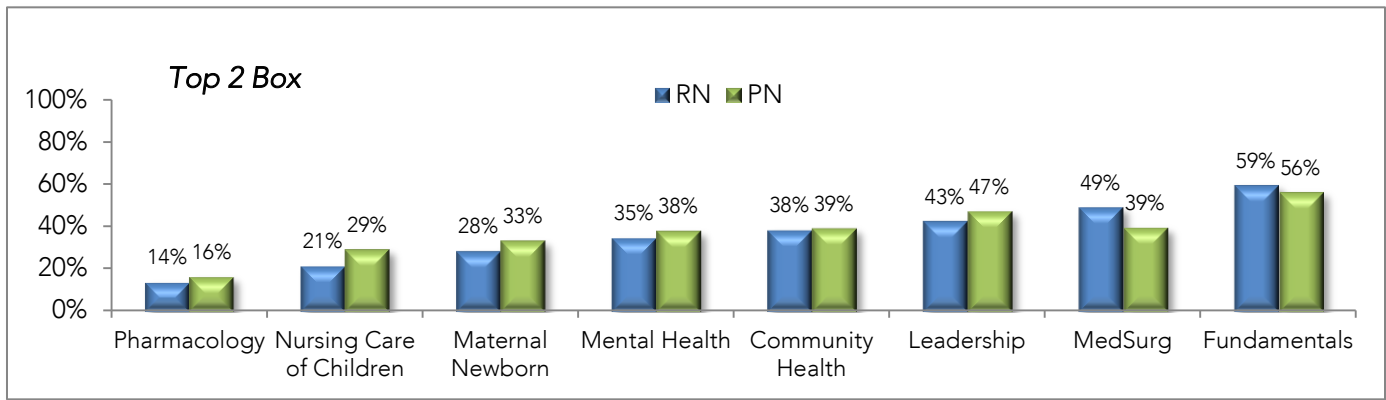
- *How does confidence across nursing content areas predict NCLEX anxiety?*

## METHODOLOGY

Between January 2, 2008 and March 13, 2012, 32,665 post-graduation, and pre-NCLEX-passing potential future nurses (24,088 RN and 8,577 PN) were surveyed. Respondents were recruited as part of Assessment Technologies Institute's NCLEX tutorial program: Virtual ATI. An invite to complete the survey was provided prior to beginning the program and the data are therefore largely representative of unassisted post-graduation and pre-NCLEX examinee sentiment. Survey questions targeted future examinees' perceived mastery of nursing content and their overall NCLEX anxiety.

Nursing content area confidence was measured on a 5-point scale ranging from 1 = "weak" and 5 = "strong." NCLEX anxiety was also measured using a 5-point scale, with options ranging from 1 = "low" to 5 = "high." Responses on the confidence scales were dichotomized so that the higher scores of 4 and 5 were equal to 1 and all other responses equaled 0. Averages of this dichotomy across respondents can be interpreted as the percent of examinees with favorable (i.e., Top 2 Box) levels of confidence.

Figure 1. First Time NCLEX Examinees' Subject Matter Confidence



## RESULTS

### Confidence Levels for 1<sup>st</sup> Time Examinees

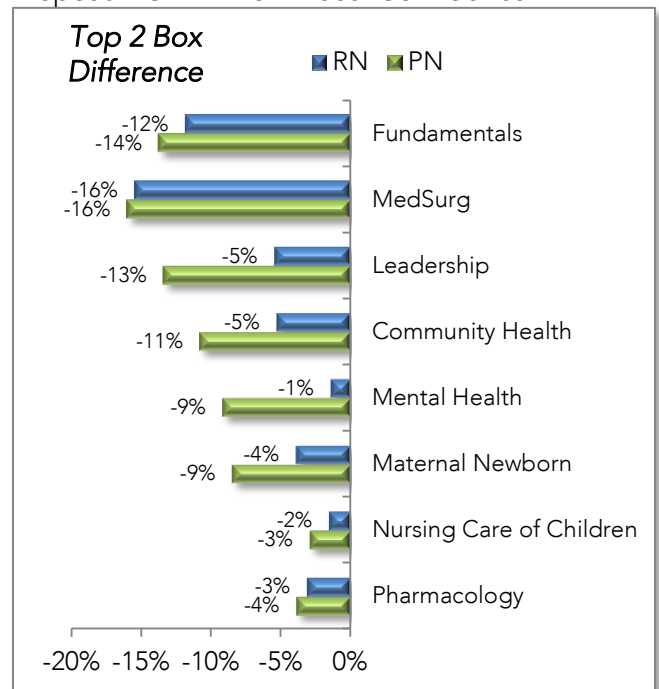
This survey's results highlight marked disparities in confidence across nursing content areas (see Figure 1). For both RN and PN 1<sup>st</sup> time NCLEX examinees, the lowest confidence was observed within the subject of pharmacology. Only 14% of all NCLEX-RN examinees and 16% of all NCLEX-PN examinees had favorable ratings of pharmacology confidence. Conversely, nursing fundamentals received the highest ratings of confidence with 59% of recent RN graduates and 56% of PN students reporting confidence. Although low confidence in the pharmacology content aligns well with anecdotal evidence, the uniformly low levels of confidence across all content areas suggests that there are widespread opportunities to supplement nursing program curricula.

### 1<sup>st</sup> Time vs. Repeat Examinees Confidence

As might be expected, examinees that reported failing the NCLEX on a previous occasion also reported lower confidence across all subject areas. Compared to first time examinees, the largest differences in repeat examinee confidence were observed in the fundamentals and med surg content areas (see Figure 2). Small drops in confidence are likely indicative of content areas where students have accurately gauged their ability. Large gaps in confidence, however, are most likely indicative of content areas where NCLEX failure highlighted to students where they have overestimated their content mastery. Based on

this interpretation of the data, both med surg and fundamentals appear to be subjects where students are potentially overconfident. Along a similar line of reasoning, whereas first time NCLEX-PN examinees are frequently more confident than their RN counterparts, PN re-testers see precipitous drops in confidence compared to RN students. It may therefore be concluded that PN NCLEX examinees are at a greater risk of approaching the NCLEX with unrealistically high confidence.

Figure 2. Comparative Differences for 1<sup>st</sup> Time and Repeat NCLEX Examinees' Confidence



Note: Independent samples t tests were run for both RN and PN 1<sup>st</sup> time vs. repeat examinee confidence. With the exception of RN-Mental Health and RN-Nursing Care of Children, all content area differences were significant at the 95% confidence level.

### Confidence as a Predictor of NCLEX Anxiety

Taken as a whole, the various nursing content areas are significantly predictive of 1<sup>st</sup> time examinees' NCLEX anxiety (RN:  $R^2 = .09, p < .01$ ; PN:  $R^2 = .08, p < .05$ ). Although statistically significant, this amount of variance accounted for appears relatively small. However, considering the myriad of non-academic contributors to NCLEX anxiety (e.g., general test anxiety), these confidence based contributions are both practically significant and highly actionable. Of note, individual nursing content areas were found to vary in predictive importance for NCLEX anxiety. Relative weights analysis (Tonidandel & LeBreton, 2011) was used to assess each nursing content area's contribution to 1<sup>st</sup> time examinees' NCLEX anxiety (see Figure 3).

For both RN and PN first time NCLEX examinees, the largest predictors of NCLEX

anxiety are the pharmacology and med surg content areas. The relative magnitude of med surg and pharmacology as predictors of NCLEX anxiety is surprising, given that the next most predictive content area accounts for less than 1/3 as much predictive power. Clearly, 1<sup>st</sup> time examinees are highly sensitive to their mastery of med surg and pharmacology content areas.

When similarly analyzing data for repeat NCLEX examinees, a different pattern of relative importance emerges (see Figure 4). Compared to 1<sup>st</sup> time examinees, repeat PN examinees report a greatly reduced importance for the med surg content area. This finding is counterintuitive given the large difference between med surg content confidence for 1<sup>st</sup> time and repeat PN examinees (see Figure 2). This discrepancy in findings might indicate that these individuals

Figure 3. Content area relative weights for 1<sup>st</sup> time examinee anxiety

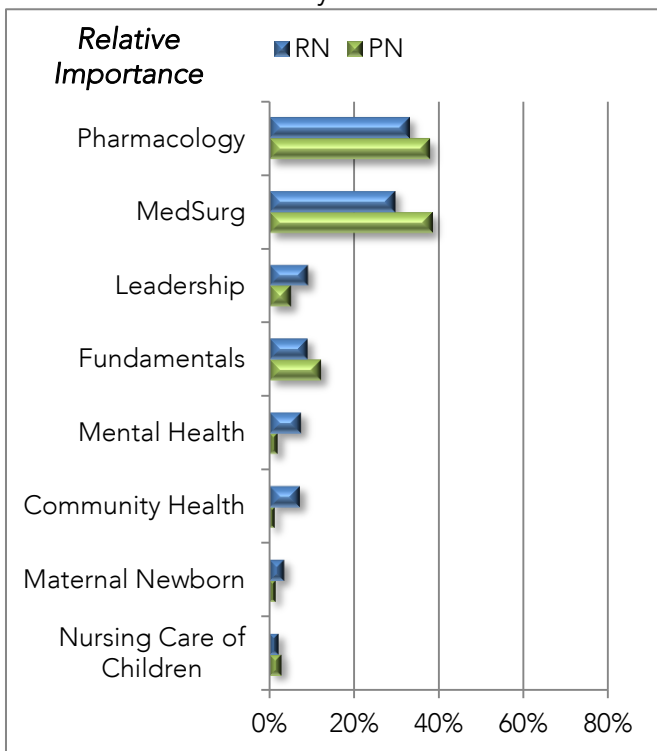
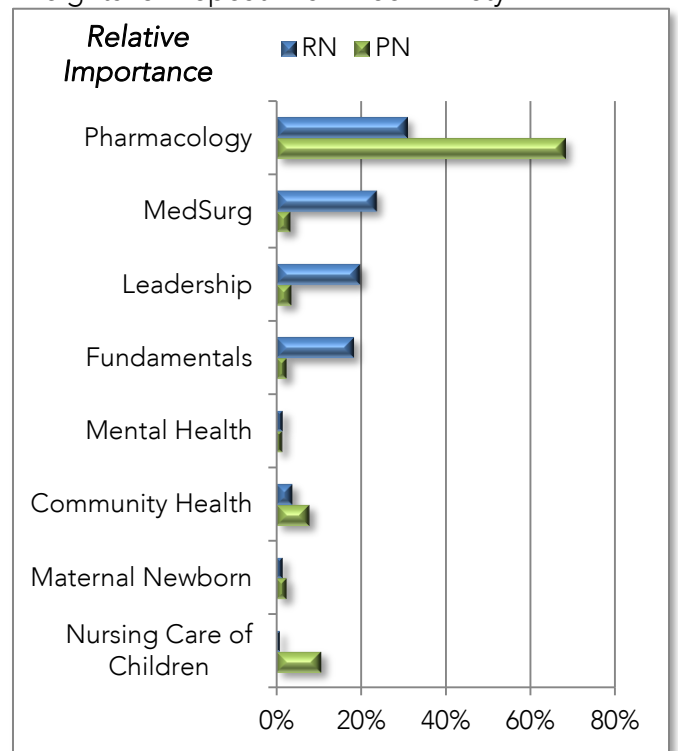


Figure 4. Content area Confidence Relative Weights for Repeat Examinee Anxiety



Note: Relative weights analyses were run at the respondent level data using all scale points. Values depicted in Figures 3 & 4 represent each content area's percent of total variance accounted for. Respectively, PN and RN relative weights within each figure sum to 100%.

are becoming overly focused on the pharmacology content area at the expense of adequately preparing for the med surg area. Additionally, compared to 1<sup>st</sup> time examinees, a greater proportion of RN repeat examinees' NCLEX anxiety can be attributed to the leadership and fundamentals content areas. When paired with the confidence level differences reported in Figure 2, this finding suggests that the RN repeat examinees may more readily recognize content area deficits than their PN counterparts.

### CONCLUSION

Students choose the field of nursing because of a desire to help others. Students with both the determination and requisite skills to complete a nursing program are clearly a special group of individuals. It is in society's best interest to enable these future professionals with the tools and skills needed to pass the NCLEX. This study's findings indicate that there are great opportunities to better prepare and serve the nursing student population.

Analysis of survey respondents' data highlights an immediate need for greater emphasis on pharmacology instruction prior to NCLEX examination. Between 84% and 86% of all 1<sup>st</sup> time NCLEX examinees reported that they were less than confident in pharmacology. Furthermore, for 1<sup>st</sup> time RN and PN examinees, pharmacology accounts for more than a third of all academic related NCLEX anxiety. Together, these findings highlight the need for greater preparation and curricular guidance in the pharmacology content area.

This study also uncovers the potential for PN examinees to greatly overestimate their nursing subject matter mastery. Of note, significant differences in confidence for all content areas was observed for 1<sup>st</sup> time and repeat NCLEX-PN examinees. The largest differences in 1<sup>st</sup> time and repeat PN examinee confidence were observed in med surg,

fundamentals, and leadership. These findings highlight potential areas where nurse educators need to provide realistic previews of NCLEX-PN content.

The NCLEX is, and should continue to be, a high stakes assessment. The NCLEX represents a critical gateway through which only those professionals possessing the required knowledge and skills may enter the nursing profession. It is therefore natural that examinees feel a certain level of anxiety about the assessment. Although completely addressing large scale NCLEX anxiety is not feasible, increasing students' preparedness and overall confidence is achievable. The findings of this study show that a little under half of 1<sup>st</sup> time examinees feel confident in any one subject. As such, this study uncovers the immediate need for broad support leading up to the NCLEX-PN and NCLEX-RN examinations. Research like the study outlined in this paper, as well as the continued development of supporting materials are ways that ATI helps to guide nursing programs to best prepare their students to achieve NCLEX success.

### REFERENCES

- Cassady, J. C., & Johnson, R. E. (2002). Cognitive test anxiety and academic performance. *Contemporary Educational Psychology, 27*, 270-295.
- Tonidandel S., & LeBreton, J. M. (2011). Relative importance analysis: A useful supplement to regression analysis. *Journal of Business Psychology, 26*, 1-9.

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If you have any questions regarding this paper or its findings, please do not hesitate to contact us at: [aticommunications@atitesting.com](mailto:aticommunications@atitesting.com).