

Measuring APRN Outcomes with Standardize Testing

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Background

- There are more than 158,000 practicing NPs. Close to 9,203 new NPs are prepared each year at over 325 colleges and universities in the U.S.
- To assure a match between education and clinical competencies, certification is a commonly legislated practice eligibility mandate.

- Graduate nursing faculty are implementing standardize certification predictive testing, exit exam benchmarking, and remediation strategies to facilitate student success on national certification exams.
- Evidence-based testing product
 - Reliable and valid test items
 - Matched certification body test blueprints
 - Established national benchmark or cutscore

Exam Blueprints



- HESI™ APRN Exam Blueprints
 - HESI Standard Scoring Categories
 - NONPF Competencies
 - ANCC & AANP Exam Content Outlines
 - National Organization of Nurse Executives
- Exams Developed
 - Family Nurse Practitioner
 - Adult Nurse Practitioner
 - Acute Care Nurse Practitioner*
 - Nursing Executive*
 - 3Ps – Patho/Pharm/Physical Diagnosis*

* Piloting Exam

Reliability

- Reliability Estimates—dynamically measured
- Calculated for each HESI exam administered
 - Item Difficulty
 - Item Discrimination
 - Point Biserial Correlation Coefficient
 - Kuder-Richardson 20 (KR-20)

Morrison, S., Adamson, C., Nilbert, A., & Hsia, S. (2004) HESI Exams: An overview of reliability and validity. *CIN: Computers, Informatics, Nursing*, (22)4, 220-226.

Prairie View A&M University

- FNP Program
 - Admits each semester
 - Currently has 109 students enrolled with FNP declared as their major
 - Primarily part-time students



Purpose

- The aim of this study was to determine the predictive rate for Advanced Practice Registered Nurse success on national advance practice certification testing for a cohort of graduate Family Nurse Practitioner students.
- In addition, testing reports served as the basis for formative evaluation, remediation, and self-directed student learning.

Methods

- After obtaining Institutional Review Board approval, a cohort of students was invited to participate in testing and report review.
- The Elsevier HESI Family Nurse Practitioner Exam (FNP) consisting of 110 items was taken electronically and individualized score reports were printed at the conclusion of the exam.
- Faculty reviewed exam outcomes and reports with the participants and action plans were developed.

Instruments

- Investigator Questionnaire
 - Anonymous
 - 12-item multiple choice
 - Age
 - Ethnicity
 - Years of nursing
 - Enrollment status
 - Test preparation strategies used

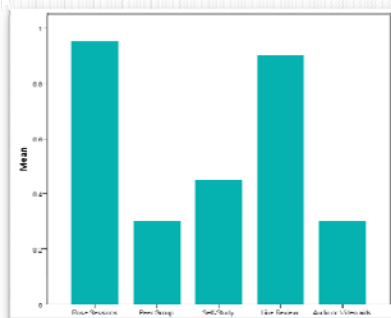
Instruments

- Elsevier HESI™ APRN FNP
 - 100-item APRN Comprehensive Exams
 - 10 pilot items; Multiple choice and multiple answer questions
 - Reliabilities and Average Item Uses
 - KR-20 ~ 0.932
 - Item uses = ranges from 466 to 2394
 - HESI Recommended Benchmarks
 - Recommended Score - 800 and above
 - Minimally Acceptable Score - 750

Results

- Twenty-one (84%) of the 25 students participated, 19 females and 2 males.
 - 17 were African-American and one each was Hispanic, Caucasian and Asian
- All students were enrolled as part-time students.
- Most students had been Registered Nurses for five or more years.

Remediation Strategies



Results

- HESI score ranges for the FNP Exam were:
 - Ranged from 604 to 1035
 - Mean of 801
 - Mode of 865
 - Standard deviation of 119
- All students have passed the American Academy Nurse Practitioner Family certification

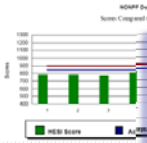
Summary Scoring Report

| SUMMARY OF AGGREGATE FINDINGS | | | |
|-----------------------------------|------|------------------------------|------------|
| Number of Students | 21 | Mean HESI Score | 801 |
| Number of Scored Test Items | 100 | Median HESI Score | 822 |
| Number of Non-Scored Test Items | 10 | Mean Conversion Score | 74.85 |
| Reliability of Examination (KR20) | 0.00 | Range of HESI Scores | 604 - 1035 |
| | | Standard Deviation of Scores | 119.04 |

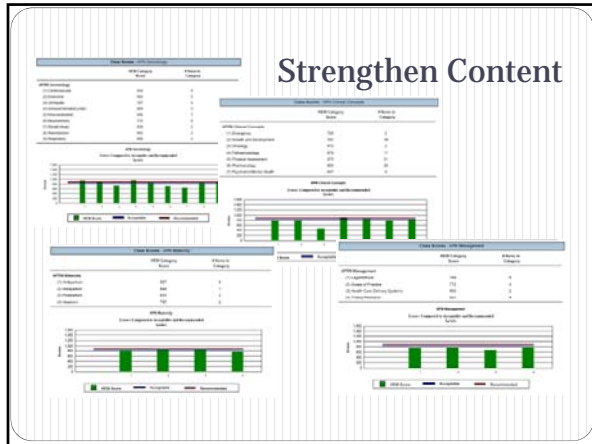
| HESI EXIT EXAMINATION SCORES: PREDICTION OF STUDENT ANCC/ANP SUCCESS | | | |
|--|------------------------------|---------------|---------------|
| HESI Scoring Interval | Performance Level | # of Students | % of Students |
| 9 - 850 | Recommended Performance | 9 | 43% |
| 800 - 849 | Recommended Performance | 2 | 10% |
| 750 - 799 | Acceptable Performance | 2 | 10% |
| 700 - 749 | Acceptable Performance | 4 | 19% |
| 650 - 699 | Below Acceptable Performance | 2 | 10% |
| 600 - 649 | Below Acceptable Performance | 2 | 10% |
| 550 - 599 | Needs Further Preparation | 0 | 0% |
| < 500 - 549 | Needs Further Preparation | 0 | 0% |

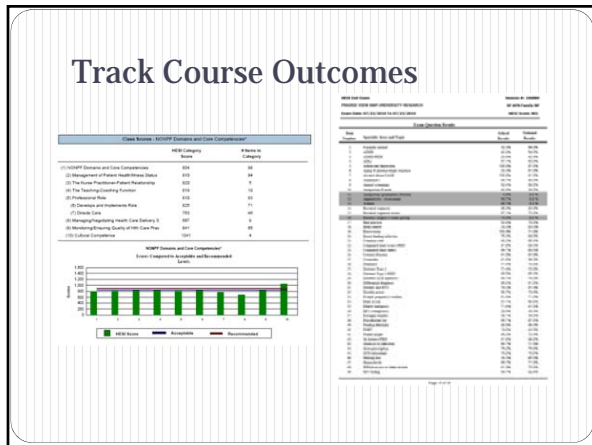
Identify Learning Needs

| Class Scores | | |
|---|------------|---------------------|
| NNDPP Domains and Core Competencies - Detail | | |
| | HESI Score | # Items in Category |
| (1) NNDPP Domains and Core Competencies | 754 | 95 |
| (2) Management of Patient Health/Wellness Status | 750 | 84 |
| (3) The Nurse Practitioner-Patient Relationship | 772 | 9 |
| (4) The Teaching/Coaching Function | 808 | 19 |
| (5) Professional Role | 781 | 83 |
| (6) Develops and Implements Plan | 776 | 71 |
| (7) Directs Care | 787 | 46 |
| (8) Managing/Regulating Health Care Delivery Cycle | 803 | 9 |
| (9) Monitoring/Ensuring Quality of Health Care Practice | 771 | 60 |
| (10) Cultural Competence | 782 | 4 |



Provided valuable student competency data that allowed faculty to address student knowledge gaps with remediation and clinical experiences.





Program Evaluation

- **Lessons learned from program evaluation**
 - Use the evidence to make decisions
 - Review reports but keep a perspective on how your students are performing compared to other schools
 - Track and Trend over several cohorts
 - Adds richness of details when multiple learning strategies are being implemented

Conclusions

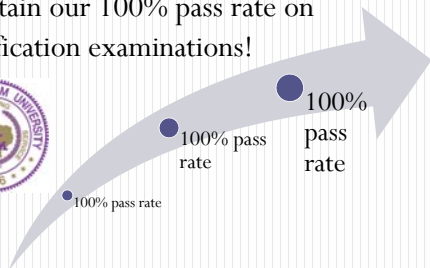
- HESI Exit standardize testing
 - measured students' application of knowledge to clinical practice situations
 - predict certification exam success
 - identified specific areas for remediation
 - contributed to data for program curriculum evaluation and accreditation

Summary

- We plan to continue to use standardize testing in the final FNP course – self-assessment and remediation
- We are considering the HESI 3Ps exam at the beginning of the Adult Elderly course
- Consider consequences of standardize testing will be implemented

Long Range Goal

- Maintain our 100% pass rate on certification examinations!



Questions ??

- Thank you !



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