Predicting Success; an Analysis of the Characteristics of Applicants to the Ontario PHCNP Program

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Research Questions

1. What are the characteristics of nurses applying for admission to the Ontario PHCNP Program?

2. Which attributes or characteristics are the best informers of future success in the PHCNP Program and registration as a NP-PHC in the province of Ontario?

Null hypothesis: There is no relationship between applicant characteristics and success in the PHCNP Program or registration examinations

Review of Literature

- There is limited data available describing the relationship between attributes of potential applicants and their success in a nursing graduate program.
- Other methods for applicant selection used by other health professions included in the literature search that may prove more reliable were reviewed. These included:
  Cognitive Measures
  - Grade point average (GPA)
  - Medical College Admissions Test (MCAT) and other admission tests
  Non-cognitive Measures
  - Personal Essays/Letters of Reference
  - Structured Interviews
  - Personality Factors and testing
  - Multiple Mini-Interviews (MMI) and Objective Structured Clinical Examinations (OSCEs)
- There was no consensus as to which selection tools provide consistent reliability, sensitivity, specificity or validity in relation to predicting which students will be successful graduates.

Conceptual Model

- Benner's (1984) model was used to guide the design of the study and interpret the results
- Characteristics of interest are those representing measures of experience, knowledge and skills, and are consistent with those derived by Benner from the Dreyfus model
- Applicants to the PHCNP Program are not experienced NPs and most have been in practice for less than 6 years)

Research Design

A retrospective quantitative analysis of data normally collected for enrolment decision-making including:
- Demographic Information
- Undergraduate Grade Point Average (UGPA)
- Scores on nursing theory and research courses in the applicant's undergraduate program
- Number of years of nursing experience
- Type of clinical experience

Chart 1: Population Statistics for 4 Sites

		Ryerson University	University of Ottawa	University of Windsor	York University	Total
2010	n	8	9	7	12	36
	Pass Rate	87.5	100	100	100	97.2
2011	n	14	10	15	15	53
	Pass Rate	86	100	100	60	85
2012	n	20	12	16	6	54
	Pass Rate	95	100	81.3	83.3	90.7
2013	n	18	18	11	23	70
	Pass Rate	94	94	100	91	94.75

Total for 4 years: N=213, Failed n=20, Pass rate = 91.9%

Sample

- Applicants to PHCNP Program at four participating universities approached for consent by mail
- Data from successful and unsuccessful applicants included in analysis
- Data from consenting applicants from 2009-2012 collected for analysis
- Most participants earned their undergraduate degree in Ontario (n=45)
- 52 participants passed the registration exam on the 1st writing, with only 1 passing it on the 2nd writing
- Of the 213 potential participants, only 53 participated in the study (25% response rate)

Results

1. Characteristics of Applicants to the Ontario PHCNP Program
   - UGPA: Variation between recorded overall GPA by universities presents challenges in analysis.
   - Scores of Nursing Theory and Research Courses: Majority of successful applicants earned B+ or higher, few with very low grades
   - Years of Nursing Clinical Experience: Experience ranged 1-17 years at time of application; over 55% had less than 5 years
   - Types of Clinical Experience: Common areas of experience were acute care, pediatrics, gerontology and primary health care.

2. Characteristics Predictive of Applicant Success

- None of the characteristics were predictive of future success in the program; only one student out the 53 who participated was not successful on first writing of the licensing exam.
- Given the mix of experience represented it appears there is no one clinical pathway that leads nurses to choose a career as a PHCNP in Ontario
- Overall very few students in the provincial program are unsuccessful in registering; most of those who fail the first writing are successful on the second writing (CNO, 2015)

We are not able to reject the null hypothesis.

Limitations

- Only 1 person did not pass first writing of exam
- Only nurses who completed the program and qualified to write the registration exam were included.
- Inconsistencies amongst universities for documentation on the transcripts limits what can be analyzed.
- Sample size was smaller than hoped for.
- This study sample differed from sample used in prior study (Jensen & Walkerley, 2014) where there appeared to be a trend supporting years of prior nursing experience predicting on the first writing of registration exam.
- It was hoped that by expanding study to include four sites and a larger sample, this trend could be examined more closely to see if it was predictive.

Discussion of Findings

- This study was informative in describing education and experience that successful applicants bring to the program.
- Findings are also important for advising undergraduate student so they can make the best choices to support future career aspirations.
- The need for NPs to be skilled in conducting and consuming research is growing and this raises concerns about the very low scores for these undergraduate courses for some applicants.
- Questions emerged regarding the reasons for attrition from program. Do they differ from the group that complete? This population not captured by any research and needs further study and may add to what we know about characteristics of successful graduates.

Future Research

- What can we learn from students who do not complete the program? Are they different in some way?
- What pre-course knowledge and skills are most relevant or predictive of success in the first year of the program?
- How much acute care experience is transferable to primary care?
- A growing number of students in the PHCNP program are indicating an interest in doing a thesis and in pursuing doctoral studies in the future. How can this be supported as we move forward?

Acknowledgements