

Evaluation of post-graduate online education program for Nurse Practitioners

CELICIA LITTLE, MSN, CPNP, SHARON DUDLEY-BROWN, PHD, FNP-BC, LINDSAY WILSON, MSN, CPNP, MARIA OLIVA-HEMKER, MD

JOHNS HOPKINS HOSPITAL, JOHNS HOPKINS UNIVERSITY, SCHOOL OF NURSING, JOHNS HOPKINS SCHOOL OF MEDICINE; BALTIMORE, MD,

Introduction

The Advance Practice Registered Nurse (APRN) consensus model notes that preparation for specialty practice in the formal NP program is not mandatory, therefore the educational foundation needs for specialty providers may not be met (NCSBN, 2008).

To bridge the gap in education and promote safe and quality care, post-graduate education programs are recommended by the Institute of Medicine (Hart, 2006).

Objectives

- Assess the utility of a post-graduate online education program for Nurse Practitioners (NP) through a needs assessment survey, followed by development and implementation of a pediatric gastroenterology focused post-graduate online education program.

Methods

Design:

- Two part education study approved by Johns Hopkins IRB
 - 15 question needs assessment survey
 - Education intervention
 - 5 learning modules
 - 10 question pre-test, post-test

Setting:

- Needs assessment survey-NAPNAP, APGNN, Qualtrics
- Education intervention-NAPNAP

Sample:

- Inclusion criteria:** Nurse Practitioners certified or employed in pediatrics of any background, age, gender, ethnicity, employment status and level of experience
- Exclusion criteria:** Non-NP professionals and those not certified, employed or interested in pediatrics

Interventions

- Develop and disseminate a needs assessment survey to determine the need for post-graduate education programs.
- 2 Develop a five-module, online pediatric gastroenterology education program using education materials from experts in the field and clinical practice guidelines.
- Develop a 10 question pre/post-test to assess knowledge along with an evaluation of the online education program to aid in development of future programs.

Outcomes

- Demonstrate a need for a post-graduate education program
- Note a statistically significant difference (increase) in post vs pre-knowledge scores.

Measures

- A 40% participant approval rating of an online education program noted on needs assessment survey.
- Comparing the mean post-test scores to the mean the pre-test scores.

Statistical Analysis

- G-power Analysis for pooled effect size
- Paired t-test to assess mean difference in pre/post tests

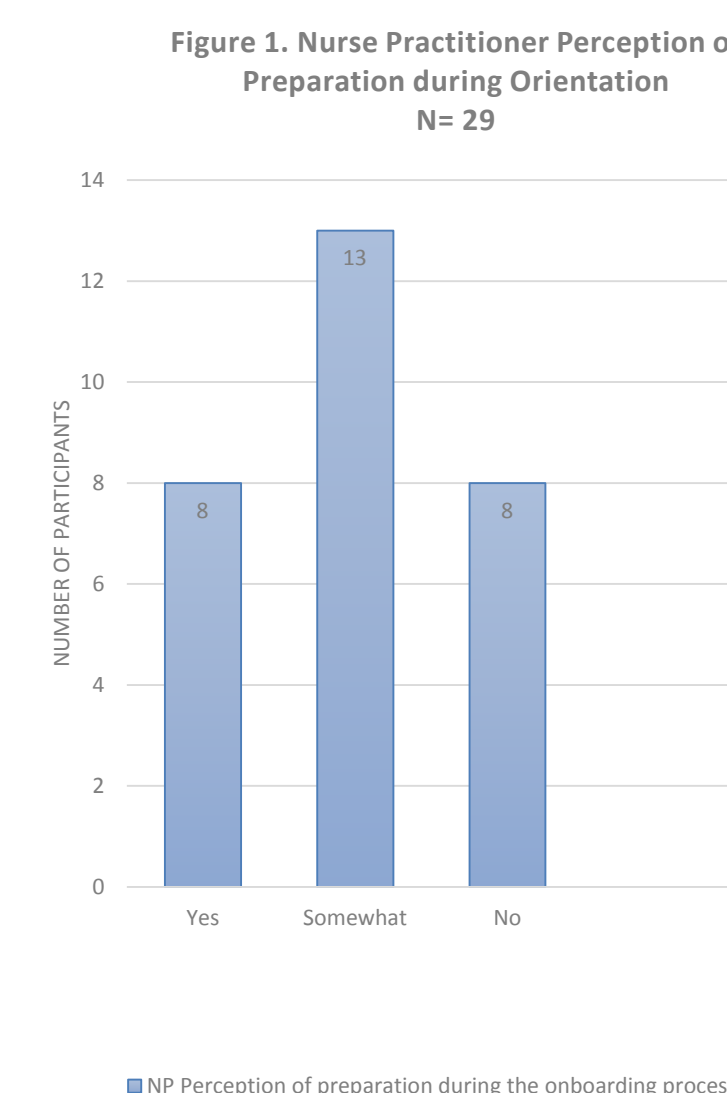
Results

- 40% of participants chose online education programs as their preferred format for post-graduate education
- Higher mean score post education program implementation (pre-test mean 8.63, SD=1.16; post-test mean 9.45, SD .767).

Variable	N (%)
NP training	
Acute Care	2 (5.26%)
Primary Care	35 (92.11%)
Both	1 (2.63%)
NP certification	
PNP	33 (86.84%)
FNP	5 (13.16%)
Currently Practicing	
Yes	36 (94.74%)
No	2 (5.26%)
Years of Experience	
Less than 1 year	3 (7.89%)
1-5 years	8 (21.05%)
5-10 years	3 (7.89%)
Greater than 10 years	24 (63.16%)

Table 1 displays the demographic variables received from survey participants prior to the educational intervention, including type of NP training, type of NP certification, practice status and years of experience.

Education Format	N (%)
12-month fellowship program	5 (13.51%)
Online course	15 (40.54%)
1-2-day boot camp	7 (18.92%)
1-week immersion	5 (13.51%)
Post Master's certificate program	4 (10.81%)
Other	1 (2.70%)



Thirty-seven of the 38 participants answered the survey question regarding their education format preference. Fifteen of the 37 participants preferred online education followed by boot-camp style sessions, then 12- month fellowship programs and immersion weeks. Figure 1 represents responses to the needs assessment survey from 29 of the 38 participants and notes that most NP participants felt somewhat prepared.

Figure 2. Summary of Nurse Practitioners Proficiency in Practice N=16

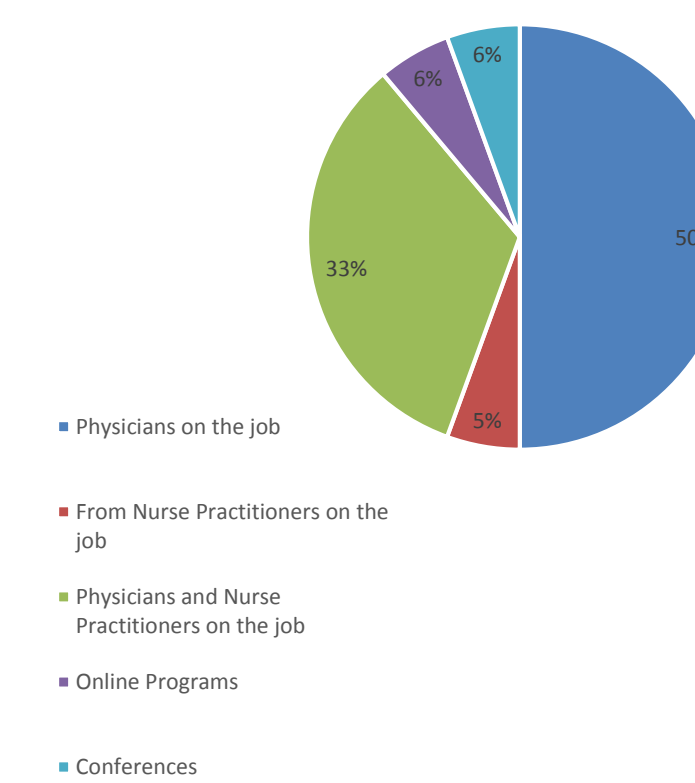


Table 3 represents the differences among demographic characteristics for the 102 Nurse Practitioners that participated in the online education intervention. The majority of the NPs were currently practicing and primary care trainees displayed here include NP certification type (Pediatric Nurse Practitioner vs Family Nurse Practitioner), current practice setting, years of practice, and specialty organization membership. Pediatric certification and the pediatric practice setting were most common among the NP participants. Over 60% had greater than 5-10 years of experience and over half of the NP participants were members of a specialty organization. Sixteen of the 38 survey participants answered the survey question that discussed how NPs were prepared for their role. The majority of NPs received training from physicians then both physicians and NPs.

Figure 3. Mean Differences in Pre and Post-test Scores among NP education intervention participants N=102

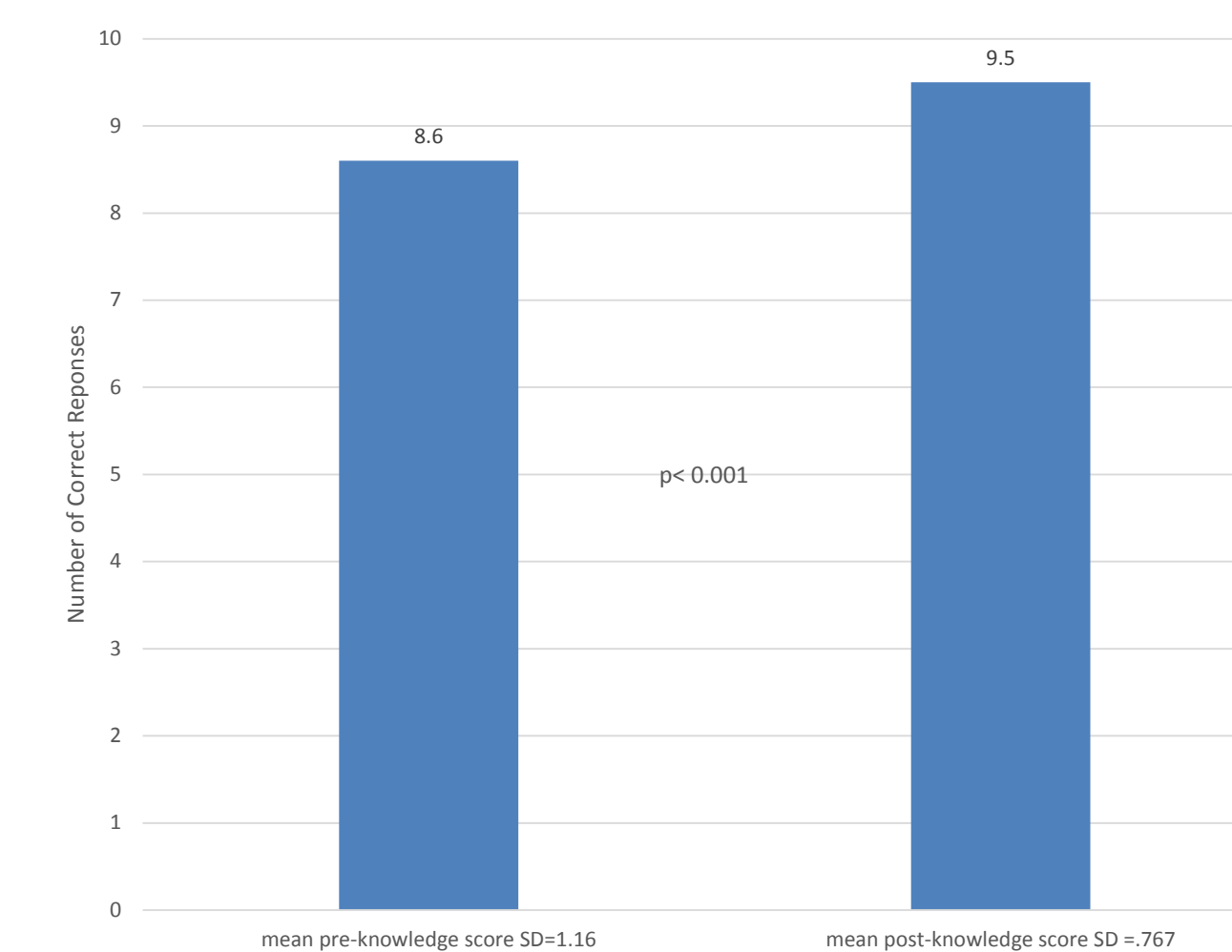


Figure 3 represents the mean differences and standard deviations of pre and post-test scores was a 10 on a 10-point scale. A paired t-test was used to analyze the sum of the pre and post knowledge scores and was noted to have a statistically significant increase with a p-value < 0.001.

Variable	N (%)
NP certification	
PNP	99 (97.1%)
FNP	3 (2.9%)
Current Practice Setting	
Pediatrics	101 (98%)
Family Medicine	1 (2%)
Years of Experience	
Less than 1 year	17 (16.7%)
2-5 years	22 (21.6%)
5-10 years	36 (35.3%)
Greater than 10 years	27 (26.4%)
Specialty Organization Membership	
Non-member	40 (40%)
Member	62 (60%)

Conclusions

- All NPs transitioning into specialty practice should feel adequately prepared and at least half of preparation should occur by other NPs.
- Adaptation of post-graduate education models employed by our physician and physician assistant counter parts should be considered to keep up with the demands of health care and limit job performance issues.
- Online education programs help increase specialty knowledge
- Cook's internet-learning meta-analysis demonstrated a preference for online education programs to enhance NP competence, transition to practice, job satisfaction and patient outcomes.
- Implementation of similar programs may insure that competent practitioners receive the education needed to provide safe patient care
- Results of this project established a need for post-graduate education programs and identified them as beneficial across specialties.
- There is an overall need for additional national qualitative and quantitative post-graduate program data to determine the direct impact of these programs on perception of preparation, practice competence and patient outcomes.



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