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University of Nebraska Medical Center
College of Nursing

DOCTOR OF NURSING PRACTICE (DNP)
FINAL DNP PROJECT

Evaluating the Impact of Nursing Assistant Employment on New Graduate Nurse
Practice in the Acute Care Setting

by

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The final DNP project presented to the

Faculty of the University of Nebraska Medical Center College of Nursing
In Partial Fulfillment of the Requirements for the Degree

DOCTOR OF NURSING PRACTICE
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Abstract

Background: New graduate nurses (NGNs) are expected to enter the acute care setting ready to provide safe and quality care in a fast-paced environment filled with high acuity patients, shortened lengths of stay, and difficult nurse to patient ratios (Clark & Springer, 2012).

Employers, nursing students, and consumers are setting high expectations all nursing graduates will possess specific skills, knowledge, and competencies upon entry into practice (American Association of Colleges of Nursing, 2020).

Purpose: The purpose of this project was to determine the impact of NA program completion and employment on the NGN during the first year of nursing practice. The specific aims were: 1. To determine the impact of NA employment on nursing competence 2. To determine if nursing assistant work influences intent to stay during the first year. These aims were used to respond to the question, In NGNs, does prior NA employment effect nursing competence and intent to stay during the first year of nursing practice?

Design: A quantitative survey design was used to assess the specific aims of the study: 1. Determining the impact of NA employment on NGN competence and 2. To determine if nursing assistant work influences intent to stay during the first year.

Methods: Twenty-five NGNs participated in the survey between June 2021 and July 2021.

Conclusion: The low survey response rate impeded this study, but there were still findings that are useful for hospitals and nursing colleges. The high scores on the Nurses' Retention Index should encourage hospitals and colleges to work together to build partnerships that recruit nursing students to train and work as NAs during nursing school.

Evaluating the Impact of Nursing Assistant Employment on New Graduate Nurse Practice in the Acute Care Setting

New graduate nurses (NGNs) make up approximately 10% of a hospital's nursing staff in the United States (Berkow, Virkstis, Stewart, & Conway, 2009). In 2019, over 180,000 NGNs passed the National Council Licensure Examination for Registered Nurses (NCLEX RN) (National Council of State Boards of Nursing, 2020). New graduate nurses are expected to enter the acute care setting ready to provide safe and quality care in a fast-paced environment filled with high acuity patients, shortened lengths of stay, and difficult nurse to patient ratios (Clark & Springer, 2012). Employers, nursing students, and consumers are setting high expectations all nursing graduates will possess specific skills, knowledge, and competencies upon entry into practice (American Association of Colleges of Nursing, 2020).

A concern is the perception of readiness for practice. A significant difference exists as 90% of nursing educators believe graduating nursing students are adequately prepared for practice, whereas only 10% of nurse executives agree with this belief (Berkow, et al., 2009). The American Association of Colleges of Nursing (AACN) is revising the educational framework for nursing education utilized by colleges and universities (2020). The proposed framework calls for new ways of thinking and redesigned approaches to nursing education that will better prepare the future nursing workforce through a competency-based curriculum (AACN, 2020). Opportunities exist for innovative relationships between nursing schools and acute care organizations to increase the competency and retention of NGNs through nursing assistant (NA) employment during school.

Purpose and Aims

The intention of this project was to evaluate an intervention that can occur prior to professional nursing practice that could increase nursing competence and intent to stay during the NGN's first year. This could potentially save organizations the high cost of turnover and improve both patient and NGN experiences. The intervention that was evaluated is nursing assistant (NA) completion and employment prior to RN practice. The purpose of this project was to determine the impact of NA program completion and employment on the NGN during the first year of nursing practice. The specific aims were: 1. To determine the impact of NA employment on nursing competence 2. To determine if nursing assistant work influences intent to stay during the first year. These aims were used to respond to the question, In NGNs, does prior NA employment effect nursing competence and intent to stay during the first year of nursing practice?

Methods

Design

A quantitative survey design was used to assess the specific aims of the study: 1. Determining the impact of NA employment on NGN competence and 2. To determine if nursing assistant work influences intent to stay during the first year.

Subjects

In accordance with Duchscher's framework, NGNs, defined as those in the first year of professional nursing practice after attaining a registered nursing license, were included in this project. New graduate nurses make up 14% of the 956 full time bedside nurses at the hospital surveyed (K. Pewett, personal communication, March 30, 2020). New graduate nurses who participated in a nurse residency program during the first year of nursing practice, provided an

access point to the anticipated research subjects. 25 NGNs participated in the survey from a possible 102 participants.

Setting

The setting of the project was a not-for-profit, Magnet designated hospital in Omaha, Nebraska. The hospital is known for cardiovascular surgery, neurosurgery, women's services, cancer care, gastroenterology, orthopedics, and diagnostic services. It has 423 acute care beds and employs over 1300 nurses; 84% are BSN prepared. Bedside RNs make up nearly 1100 of the 1300 nurses in this organization (K. Pewett, personal communication, March 30, 2020).

Tools

Two tools were utilized in this project: the Nursing Competence Scale and the Nurses' Retention Index. The first tool, the Nursing Competence Scale (NCS) assessed the first aim of the project, the effect of NA employment on nurse competence. The NCS is the most commonly used instrument to measure nursing competence in multiple stages of a nurse's career (Flinkman, Leino-Kilpi, Numminen, Jeon, Kuokkanen, & Merotoja, 2016). The NCS was developed to assess the level of competence of nurses through self or manager assessment (Merotoja, Isoaho, & Leino-Kilpi, 2004). This tool has been used repeatedly over the past 15 years and has undergone repeated psychometric testing (Merotoja et al., 2004a, Flinkman, et al., 2016).

The NCS measures generic competences of nurses regarding both functional abilities and critical thinking (Merotoja, Leino-Kilpi, & Kaira, 2004). The theoretical framework behind the instrument comes from Benner's (1984) From Novice to Expert framework (Merotoja et al., 2004a). The 73-item NCS scale (Appendix A) is categorized into 7 areas: helping role (7 items), teaching-coaching (16 items), diagnostic functions (7 items), managing situations (8 items), therapeutic interventions (10 items), ensuring quality (6 items), and work role (19 items). Each

of the 73 items is rated using the visual analogue scale (VAS) (0-100), with 0 being very low level and 100 representing very high level of competence. Each item is additionally rated in terms of frequency in which the item is performed in clinical practice. This is represented on a four-point scale with 0 being not applicable to my work, 1 meaning used very seldom, 2 used occasionally, and 3 used very often while working (Meretoja et al., 2004a). Descriptively the results of the VAS have been divided into four sections with 0-25 representing low competence, 25-50 representing quite good competence, 50-75 being good, and 75-100 as very good (Meretoja et al., 2004a).

The content validity of this instrument was assessed through literature review and on the judgments of six expert groups (Meretoja et al., 2004a). Construct validity of the NCS was assessed by collecting empirical data. Cronbach's Alpha values ranged from 0.61-0.97 at the categorical level and average alpha values of each category ranged from 0.83 to 0.92 and 90% of the alpha values exceeded 0.80 in a 22 study assessment of the tool (Flinkman, et al., 2016). Lilliefors's test for normality showed normal distribution of data upon instrument psychometric testing (Meretoja et al., 2004a).

The Nurses' Retention Index (NRI) is the second tool that was utilized and assessed the second aim of the project, the impact of NA employment on nurse retention. It is used to determine a nurses' intention to stay in nursing or leave the profession (Cowin, 2002). The index (Appendix B) consists of six declarative style items that are assessed on a Likert scale with eight responses available to each item. Responses can range from definitely false (1) to definitely true (8). Four items are positively worded and two are negatively worded. The two negatively worded items are reverse-scored. Higher scores on the NRI are indicative of stronger retention in nursing.

The NRI has been utilized multiple times over the past 18 years in nursing research. Content and construct validity were determined by exploratory and confirmatory factor analysis (Cowin, 2002). Internal consistency, utilizing Cronbach's Alpha, was generated for each item and for the index in its entirety. The results at T2 for both groups had high levels of internal consistency for 8 items with an overall index alpha of .97 for group 1 and .95 for group 2 (Cowin, 2002). The coefficient alpha in one study was .94 (Cowin, Johnson, Craven, & Marsh 2008) and .95 in another (Hart, 2005). Results of studies utilizing the NRI have strongly supported the psychometric properties of the tool and found consistency with the initial tool analysis.

Data Collection

All NGNs participating in the nurse residency program during the data collection period, in the months of June and July 2021, were invited to participate in this survey by email. The email contained information about the project coordinator, clinical project, and a link to the Qualtrics survey. The survey overview and instructions were given at this time and informed consent was collected within the survey introduction on the online survey tool. Nurse residents had 6 weeks to complete the survey.

Participant characteristics assessed included: age, gender, education, length of work experience in nursing, current role in nursing, GPA during nursing school, number of attempts to pass boards, area of nursing practice, currently enrolled in a graduate nursing program, NA program completion, length of time working as a NA, level of NA employment (full-time, part-time, casual), setting of NA work, and if they worked in a different entry-level healthcare position.

The NRI and NCS were both utilized in the survey. The NRI has 6 declarative statements that are rated on an 8-point Likert scale from 1 (false) to 8 (definitely true). The NCS has 73-

items that require competence ratings utilizing the visual analogue scale (VAS) from 0 (very low) to 100 (very high) as well as a four point scale which represents how often that item is performed in clinical practice 0 (never) to 3 (very often).

Findings

Participant Demographics

A total of 25 NGNs participated in the survey of the 102 invited participants. A demographic profile of the respondents is presented in Appendix C. The majority (92%) were female (n=23) with only 2 male respondents (8%). The mean age of respondents was 26 years with a range from 22 years to 38 years old. Ninety-two percent (n=23) of respondents graduated from a Bachelor of Nursing program. The mean grade point average in nursing school was a 3.5 with 92% of respondents reporting passing the NCLEX exam on the first attempt.

At the time of the survey all respondents were within their first year of professional nursing practice working in the position of a staff nurse. The majority, 72%, of respondents were in the 9 through 12 month range of their first year of professional nursing practice, 16% were in months 5 through 8 and 12% were in their first 4 months. The majority, 44%, identify their primary area of nursing practice as neonatal, 16% medical-surgical, 12% critical care and the remaining 28% were spread out in even smaller percentages throughout various units of the hospital.

Twenty out of twenty-five respondents (80%) reported completing a NA training course and an additional three respondents completed paperwork to be eligible on the NA registry through their nursing school curriculum. Twenty out of twenty-five respondents (80%) were employed as NAs. Length of NA employment ranged from 6 months to 9 years with a mean of 44 months. Data showed hospitals/acute care as the most common place of employment amongst

these respondents with 14 out of 20 (70%) reporting having worked there, followed by long-term care with 8 respondents (40%), and 4 respondents (20%) with experience in rehabilitation care. Very few reported working in assisted living (5%) or home health (10%). Most of the respondents reported their work commitment as part-time (40%), followed by full-time (24%), then casual employment (16%).

Respondents were additionally asked to report other entry-level jobs in healthcare with 9 (36%) responding. Positions held included dietary services (n=4), medication aide (n=3), phlebotomist (n=1), emergency medical technician (EMT) (n=1), paramedic (n=1), cardiographic technician (n=1), and licensed practical nurse(n=1). Some respondents held multiple entry-level positions.

Nurses' Retention Index Results

The NRI scores (Appendix D) range from a 25 to a 48 with a mean of a 42.5 and a median of a 44. The 5 scores from those without CNA experience range from 41 to 48 with a mean of 44.8 and a median of 45. The 20 NRI scores from those with CNA experience range from 25 to 48 with a mean of 40 with a median of 43. These scores show a favorable experience and intent to stay in nursing.

Nursing Competence Scale Results

The NCS was completed in its entirety by 6 respondents, 5 with CNA experience and 1 without. Due to the limited response no data analysis was possible.

Discussion

The AACN's new draft of *The Essentials: Core Competencies for Professional Nursing Education* (2020) lays the groundwork for filling the gaps in between nursing education and nursing practice. This document advises competency-based education and strong partnerships

between academics and practice to create better prepared nurses (2020). This small sample of NGNs found 80% worked as NAs prior to their professional nursing practice. Eliminating the 2 respondents from the sample who did not take the NA training or complete the proper paperwork to become eligible on the NA registry that increases to 87% of those who were active on the NA registry worked as NAs.

Those who worked as NAs were most likely to work in a hospital or acute care setting. The data also showed that the average amount of time worked as a NA was 44 months with the predominant work commitment being part-time. These results create an opportunity for schools and employers to collaborate and bring structure to the work experience to make it more deliberate. There could be a pathway that brings students to the hospital early on in their education, guides them throughout different learning environments, and then retains them post-graduation.

The very favorable scores on the nurse retention index are consistent with the NGNs wanting to stay in the profession of nursing. One factor that could contribute to these scores is that 72% of respondents have been working in professional nursing practice for 9 to 12 months. NGNs in this stage are no longer in an initial stage of Transition Shock, that occurs when first becoming a nurse. Additionally, 80% of our respondents have NA experience so they know the roles and expectations in nursing. Overall, 92% of respondents had worked in an entry-level health care position so they understand the expectations of health care.

Limitations

Several limitations need to be considered when evaluating the findings including the small sample size that did not allow for statistical analysis of the data. There were only 5 respondents without NA experience so 80% of responses came from those with NA experience.

Participants also did not complete the survey in its entirety so there is no analysis of the Nurse Competence Scale as there were only responses from 6 participants. Additionally, 44% of the respondents identified as neonatal nurses which is a large amount from one area of the hospital.

Conclusions

The low survey response rate impeded this study, but there were still findings that are useful for hospitals and nursing colleges. The high scores on the Nurses' Retention Index should encourage hospitals and colleges to work together to build partnerships that recruit nursing students to train and work as NAs during nursing school. Partnering health care systems could create work experiences designed to build competency. Students working as nursing assistants during school would get exposure to the realities of healthcare and nursing practice to decrease transition shock. There are opportunities to create scheduling on both the academic and employment side that allows students time to work and study. The affiliated hospital would then get the first opportunity to hire the NGN who is already employed by the organization. The NGN would already understand roles and responsibilities, have improved transition to practice experiences, a potentially shortened orientation, and improved satisfaction. The NGNs from this group sampled had very high levels of intent to stay in nursing.

Recommendations

This study needs to be repeated with a larger sample size, but one would need to consider a shorter nurse competence scale as not to deter those from withdrawing before completion. Additional considerations would be shortening the demographic questions in the beginning to shorten the survey as well as a small financial incentive or gift card for survey completion to improve the amount of completed surveys.

Another recommendation would be to adjust the sample of NGNs experience from those at any point in their first year, to those in a shorter, more defined point in time so the nurses would all be in the same phase of transition to practice. More of the respondents were in the end of their first year of professional nursing practice than were earlier in their practice where it is more likely that we would see a variation. Additionally, if the survey could be incorporated into an in-person onboarding or residency program where adherence could be higher it would also be beneficial. More data is needed to determine the effect of NA completion and employment on NGNs.

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Appendix A

Items of the Nurse Competence Scale

Item number	Items
	<i>Helping role</i>
1	Planning patient care according to individual needs
2	Supporting patients' coping strategies
3	Evaluating critically own philosophy in nursing
4	Modifying the care plan according to individual needs
5	Utilizing nursing research findings in relationships with patients
6	Developing the treatment culture of my unit
7	Decision-making guided by ethical values
	<i>Teaching-coaching</i>
8	Mapping out patient education needs carefully
9	Finding optimal timing for patient education
10	Mastering the content of patient education
11	Providing individualized patient education

Item number	Items
12	Co-ordinating patient education
13	Able to recognize family members' needs for guidance
14	Acting autonomously in guiding family members
15	Taking student nurse's level of skill acquisition into account in mentoring
16	Supporting student nurses in attaining goals
17	Evaluating patient education outcome together with patient
18	Evaluating patient education outcomes with family
19	Evaluating patient education outcome with care team
20	Taking active steps to maintain and improve my professional skills
21	Developing patient education in my unit
22	Developing orientation programmes for new nurses in my unit
23	Coaching others in duties within my responsibility area
	<i>Diagnostic functions</i>
24	Analysing patient's well-being from many perspectives
25	Able to identify patient's need for emotional support

Item number	Items
26	Able to identify family members' need for emotional support
27	Arranging expert help for patient when needed
28	Coaching other staff members in patient observation skills
29	Coaching other staff members in use of diagnostic equipment
30	Developing documentation of patient care
	<i>Managing situations</i>
31	Able to recognize situations posing a threat to life early
32	Prioritizing my activities flexibly according to changing situations
33	Acting appropriately in life-threatening situations
34	Arranging debriefing sessions for the care team when needed
35	Coaching other team members in mastering rapidly changing situations
36	Planning care consistently with resources available
37	Keeping nursing care equipment in good condition
38	Promoting flexible team co-operation in rapidly changing situations
	<i>Therapeutic interventions</i>

Item number	Items
39	Planning own activities flexibly according to clinical situation
40	Making decisions concerning patient care taking the particular situation into account
41	Co-ordinating multidisciplinary team's nursing activities
42	Coaching the care team in performance of nursing interventions
43	Updating written guidelines for care
44	Providing consultation for the care team
45	Utilizing research findings in nursing interventions
46	Evaluating systematically patient care outcomes
47	Incorporating relevant knowledge to provide optimal care
48	Contributing to further development of multidisciplinary clinical paths
	<i>Ensuring quality</i>
49	Committed to my organization's care philosophy
50	Able to identify areas in patient care needing further development and research
51	Evaluating critically my unit's care philosophy
52	Evaluating systematically patients' satisfaction with care

Item number	Items
53	Utilizing research findings in further development of patient care
54	Making proposals concerning further development and research
	<i>Work role</i>
55	Able to recognize colleagues' need for support and help
56	Aware of the limits of my own resources
57	Professional identity serves as resource in nursing
58	Acting responsibly in terms of limited financial resources
59	Familiar with my organization's policy concerning division of labour and co-ordination of duties
60	Co-ordinating student nurse mentoring in the unit
61	Mentoring novices and advanced beginners
62	Providing expertise for the care team
63	Acting autonomously
64	Guiding staff members to duties corresponding to their skill levels
65	Incorporating new knowledge to optimize patient care
66	Ensuring smooth flow of care in the unit by delegating tasks

Item number	Items
67	Taking care of myself in terms of not depleting my mental and physical resources
68	Utilizing information technology in my work
69	Co-ordinating patient's overall care
70	Orchestrating the whole situation when needed
71	Giving feedback to colleagues in a constructive way
72	Developing patient care in multidisciplinary teams
73	Developing work environment

Appendix B

Nurses' Retention Index

	Definitely False	False	Mostly False	More False Than True	More True Than False	Mostly True	True	Definitely True
1) It is my intention to continue with my nursing career in the foreseeable future.	1	2	3	4	5	6	7	8
2) I would like to stay in nursing as long as possible.	1	2	3	4	5	6	7	8
3) As soon as it is convenient for me I plan to leave the nursing profession.	1	2	3	4	5	6	7	8
4) I expect I will keep working as a nurse.	1	2	3	4	5	6	7	8
5) My plan is to remain with my nursing career as long as I am able.	1	2	3	4	5	6	7	8
6) I would like to find other employment by leaving nursing.	1	2	3	4	5	6	7	8

Appendix C

Demographic Profile and Summary of Previous Work		
Sample Demographic	Total (N=25)	Percentage (%)
Gender		
Female	23	92
Male	2	8
Age		
22-24	13	52
25-27	7	28
28-30	1	4
31-33	2	8
Over 34	2	8
Highest Degree		
ASN	2	8
BSN	18	72
BSN (Accelerated)	4	16
GPA in Nursing School		
2.6-3.0	5	20
3.1-3.5	8	48
3.6-4.0	12	48
Attempts at Passing NCLEX Exam		
One	23	92
Two	2	8
Currently Enrolled in Graduate Program		
Yes	3	12
No	22	88
Current Primary Role in Nursing		
Staff Registered Nurse	25	100
Primary Area of Nursing Practice		
Neonatal	11	44
Medical-Surgical	4	16
Critical Care	3	12
Emergency	1	4
Obstetrics	1	4
Progressive Care	1	4
Oncology	2	8
Geriatrics	2	8

Months of Professional Nursing Practice		
1-4 months	3	12
5-8 months	4	16
9-12 months	18	72
Completed a CNA Course		
Yes	20	80
No	2	8
Completed Paperwork for CNA Waiver	3	12
Worked as a CNA		
Yes	20	80
No	5	20
Length of CNA work experience		
Up to 1 year	2	8
13 months-2 years	5	20
25 months- 3 years	3	12
37 months-4 years	2	8
49 months-5 years	2	8
61 months-6 years	3	12
More than 6 years	3	12
Majority of CNA Work Commitment		
Casual	4	16
Part-time	10	40
Full-time	6	24
CNA Place of Employment		
Hospital/Acute Care	9	45
Long-Term Care	3	15
Both Hospital/Acute Care & Long-Term Care	2	10
Long-Term Care, Rehabilitation Care, Home Health	1	5
Assisted Living	1	5
Hospital/Acute Care, Long-Term Care, Rehabilitation Care	1	5
Hospital/Acute Care, Long-Term Care, Rehabilitation Care, Home Health	1	5
Hospital/Acute Care, Rehabilitation Care	1	5
Unspecified	1	5
Other Entry-level Jobs Held in Healthcare		
Phlebotomist	1	4
Medication Aide	3	12
Dietary Services	4	16
EMT, Paramedic	1	4
Cardiographic Technician	1	4
Licensed Practical Nurse	1	4

Appendix D

Nurses' Retention Index Total Score (0-48)	
Respondents without NA Experience	
1	41
2	43
3	48
4	45
5	47
Respondents with NA Experience	
1	38
2	48
3	34
4	42
5	25
6	48
7	31
8	41
9	46
10	42
11	47
12	48
13	46
14	42
15	48
16	44
17	47
18	44
19	44
20	34