ORIGINAL RESEARCH

Development and pilot testing of the graduate nurse transitional success scale to measure the transition to practice for the newly licensed registered nurse

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ABSTRACT

Background: The successful transition to independent practice of the Newly Licensed Registered Nurse (NLRN) secures patient safety and contribute to optimal patient outcomes. In a health care environment where patients present more acutely requiring more complex nursing care, the ability to ensure the NLRN's successful transition to independent practice is crucial. A review of the literature identified a lack of a tested instrument to measure NLRN transitional success.

Methods: An instrument was developed to meet this deficit. Content validity was established from the literature and from the review of the newly developed tool by an expert panel of nurses. Reliability of the instrument was tested with a sample of 50 self-identified NLRNs who completed the survey anonymously via Qualtrics®.

Results: The final survey instrument consisted of 24 items rated using a 5-point Likert-type scale and five open ended questions. Internal consistency was assessed with Cronbach's α with Total Score (24 items) $\alpha = .932$ and the subcategories ranging from $\alpha = .770$ (4 items) to $\alpha = .862$ (4 items). Years of Experience was a statistically significant divider in terms of self-reported readiness, with those with 2-3 years' experience significantly different in mean total score from those with < 1 year and 1-2 years.

Conclusions: The development of a tool to measure transitional success for the NLRN is possible. Further confirmatory Factor Analysis of the tool with different groups of NLRNs is required. A valid, reliable instrument to evaluate a successful transition to practice allows for individualized transition plans, orientation periods, and ultimately patient safety.

Key Words: Transition to practice, New nurse, Newly licensed nurse

1. INTRODUCTION

Newly Licensed Registered Nurses (NLRNs) face unique challenges on entry to practice through transition to independent clinical practice.[1] The period of transition occurs from entry to practice until up to three years of practice.[2, 3] This transitional period has been described as grueling, stressful, overwhelming, and tumultuous.[4–6] Contributing factors include the theory-practice gap, challenges related to role transition, a lack of clinical competence and experience, in-creasing patient acuity, and the growing demands of the acute care setting.[4, 5, 7–9]

During this transitional phase the NLRN leaves the familiar academic environment and enters the unfamiliar territory of professional practice experiencing a period of adjustment referred to by Duchscher[3] as transition shock. The challenges faced during this period often result in negative patient outcomes, low job satisfaction, and high turnover rates for the NLRN during the first year of practice.[9] According to

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Beckman et al.,[9] RN turnover rate was 18.7% in 2021, and nurses with less than a year of experience made up a fourth of this number.

Healthcare agencies have attempted to address the deficit in transition to practice and reduce the likelihood of NLRN's leaving the workforce by offering supportive frameworks for the transition period such as preceptorship, mentorship, residencies and internships, externships, orientation, and transition to practice programs, as well as clinical ladder or advancement programs.[10, 11] Transitional support programs have positive influence; however, they are inconsistent in duration and content.[10, 12] Aldosari and colleagues,[6] adds that these programs bolster new nurse competency and confidence, and support attrition but have inconsequential benefit to the transition process, leading to the conclusion that other factors play a major role in facilitating a successful transition. Other agencies forgo a formal residency or lengthy orientation and opt for a limited period of full-on support. The conundrum lies in a nurse's ability to transition from these programs and care for their patients' independently; a one- size-fits all approach may not be appropriate to promote successful outcomes for either patient or provider.

Despite the importance and impact of a successful transition, no one tool exists that measures the attributes of a readiness to a successful transition to independent practice. In addition, there seemed to be no agreed-to definition of a successfully transitioned nurse against which to measure the success of transition. In phase one of this study, Brown and Nocella[13] proposed that a successfully- transitioned newly-licensed nurse is one who: demonstrates a functional proficiency in assessment communication, time-management, advocacy, prioritization, clinical decision making, and care coordination. They are able to apply knowledge and adapt appropriately in new clinical situations and are assertive in accessing resources to ensure patient safety, enhance their performance and improve their skill set.

This proposed conceptual definition implies there are personal as well as professional attributes that the successfully transitioned NLRN should possess which are not easily appraised and should be considered on an individualized basis. The purpose of this study was to take as a starting point this definition and develop and evaluate a quantitative instrument to assess graduate nurse readiness for transition to independent practice.

2. BACKGROUND

A successful transition to practice helps ensure safety and satisfactory outcomes for the patient and job satisfaction for the provider.[14–16]

A review of the literature identified a crucial gap. While Brown and Nocella[13] presented a definition of the nurse who has successfully transitioned in their practice, a tool to measure the attributes of a successful transition does not exist. A review of current tools used to evaluate nurse competency and performance found that these tools did not adequately capture or convey the attributes a successfully transitioned nurse embodied as described by a panel of registered nurses and nurse leaders.[13] A major shortcoming was that the instruments evaluated the graduate nurse experience or perceptions of their transitional programs, not the level of their transition. A related tool would complement the research that currently exists by enabling the profession to quantitatively and objectively gauge transitional success and determine the level of support required on an individual basis.

Consequently, for this study, three faculty with an interest in NLRN transition and performance recognized the need for a validated tool to identify and measure the attributes of transitional success to independent practice. In-depth interviews were conducted with 17 experienced registered nurses to determine the key attributes they thought were appropriate for a nurse who has successfully transitioned in their practice, these attributes were then compared with characteristics of graduate nurses obtained through a literature search. These attributes were converted into questions to form a survey instrument named the Graduate Nurse Transitional Success Scale (GNTS Scale) which was pilot tested by 50 self-identified NLRNs. This paper describes the development process for this survey tool.

3. INSTRUMENT DEVELOPMENT

Items were generated from (1) input from 12 registered nurses and five nurse leaders (n = 17) and were evaluated for appropriateness and relevance to the attributes of a successful transition, and (2) a supported based on a review of the literature. Internal consistency of the tool was tested with 50 participants who self-identified as NLRNs. The composite measures comprised multiple questions testing confidence and self-assessed skill using a 5-point scale of: 1-Strongly Disagree, 2- Disagree, 3- Neutral/ Undecided, 4- Agree, 5-Strongly Agree.

Distinctive behaviors that were expected from successfully transitioned NLRN's were identified and organized into common themes, yielding the following attributes:

i) Competence... in skill mastery and providing patient care

ii) Confidence... in skill performance, patient teaching, using evidence

iii) Comfort... in delegating task and collaborating with a team

iv) Independence... able to perform basic nursing skills

proficiently independently

v) Safety... in performance, using technology, and applying theoretical knowledge

A successfully transitioned nurse would be expected to demonstrate skills in task proficiency, communication, collaboration, application of knowledge, delegation, accessing resources, and in caring for a group of patients.

These attributes this tool seeks to measure are in agreement with the Quality and Safety Education in Nursing (QSEN) competencies, which identify the Knowledge, Skills, and Attitudes in six core areas/competencies developed for inclusion in pre-licensure and graduate nursing programs to promote quality patientcare and patient safety.[17]

The six QSEN competencies are:
- delivering patient-centered care
- working as part of interdisciplinary teams
- practicing evidence-based medicine
- focusing on quality improvement
- using information technology.

These competencies served as the constructs against which the NLRNs performance and transitional success was measured.

4. DEVELOPMENT AND VALIDATION PROCESS

The instrument was developed according to Hinkin's three stages of scale development: (1) Domain identification and item generation, (2) Content expert validation, and (3) Pilot test.[18] The instrument was developed in two phases.

In the first phase the researchers Brown & Nocella[13] concentrated on developing the conceptual and operational definition of the construct. An item pool was created in the second phase through the interview of 17 expert participants. The instrument was developed, and a suitable scale was created. The tool was evaluated for content validity by the panel of experts. According to Elangovan & Sundaravel[19] content validity focuses on the degree to which a measure captures the full dimension of a particular concept. A pilot test of the instrument was then conducted to determine the tool's usefulness, design, and functionality. Factor analysis and Cronbach's alpha was calculated.

4.1 Stage One: Item development

The attributes affirmed by our expert respondents in phase one of the study were captured in questions and included in the questionnaire. Such as:
- Statement: "A successfully transitioned nurse should be able to independently recognize when their patients' status

has changed".
- Question: I can independently determine a change in the physical status of my patient.
- Statement: "The nurse should be able to care for a group of more than three patients and prioritize their care appropriately".
- Question: I have the ability to prioritize care for a group of 3 or more patients.

Additional questions were included to capture relevant demographic data. After all the statements or attributes were reformulated to questions the three faculty members reviewed and discussed relevance and question sequencing. This process resulted in a 24-item questionnaire not including demographic data, and 6 composite scores (total score and 5 subcategories patient load, independent assessment, communication, time management, and support). The questions of the survey instrument were closely aligned with the previously mentioned QSEN competencies. In addition, relevant theoretical concepts from Patricia Benner's Novice to Expert Theory of Skill Acquisition (1984) and Duchscher's (2009) stages of transition theory were used as the framework to guide item development. Both theorists attest to an individualized process of "progression" and non-linear transition from "novice to expert" for entry to practice nurses that evolves over time.[7]

4.2 Stage Two: Content validation

The draft instrument was then subjected to content expert validation by the panel of NLRN's and nurse leaders (n = 17). These nurses were considered experts due to their years of experience as nurses (3-25 years), were recruited through snowball sampling. The panel was asked to evaluate the tool for comprehensiveness, utility, and clarity. This led to further refinement of the tool. The feedback was incorporated, and minor modifications were made. Modifications such as wording e.g., the change from interprofessional to multi-disciplinary team, including multitasking with management of patient load, and a change of question order to allow for a logical sequence of questioning, but no items were eliminated. In general, the instrument was determined by the panel to be useful, easy to understand, comprehensive and inclusive of the identified attributes of a successfully transitioned entry to practice nurse. The survey took about 10-15 minutes to complete. The tool was then pilot tested for reliability and ease of use.

4.3 Stage Three: Pilot testing

The pilot study was conducted using a convenience sample obtained through snowball sampling. Anonymity was preserved using Qualtrics®. The study targeted a sample

representative of the NLRN population being investigated. The participants were asked to evaluate their experiences using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

4.4 Pilot study participants

Participant recruitment through snowball sampling commenced following Institutional Review Board approval. Informed consent was obtained from all participants prior to completing the 30-item questionnaire, which was done anonymously, via Qualtrics Ⓡ. Participants could withdraw from the study at any time and were not compensated for participating.

Sixty-nine participants accessed the survey; however, only 50 completed the tool. Nineteen surveys were incomplete, hence eliminated from the study. The inclusion criteria comprised being a graduate of an accredited nursing program, having one to three years clinical experience, and the willingness to participate in the study. The majority of the participants were female (n = 41, 85%). Sixty percent (n = 29) had a Bachelor's of Science (BSN) degree. Sample characteristics presented in Table 1.

5. RESULTS

For this sample, the mean total score (the sum of all 24 items) was 93 or 77.5% of possible maximum, with a higher score reflecting greater confidence. For the subcategories in descending order, the means reached 83% of possible max-

imums for communication; 80% for patient load, 77% for support, 75% for independent assessment, and 71% for time management (see Table 2).

Transition success (a self-reported evaluation of their preparedness scored as yes (1) or no (0)) was used as the ultimate outcome variable, independent sample t-tests showed a significant relationship for the total ($p = .002$/MD 10.8), and each of the subcategories, ranging from $p < .001$/MD = 3.5 for time management to $p = .049$/MD 2.28 for independent assessment and $p = .026$/MD1.78 for support (see Table 3).

Table 1. Sample characteristics

N = 50		Count	Percent (%)	Mean	Std Dev
Race	White	31	65		
	Black	3	6		
	Asian	9	19		
	Other	5	10		
Ethnicity	Hispanic	3	6		
	Non-Hispanic	45	94		
Gender	Male	7	15		
	Female	41	85		
	Non-binary	0	0		
	Other/Not say	0	0		
Degree	Assoc	18	38		
	Diploma	1	2		
	BS	29	60		
Age		50		29.7	9.9

Table 2. Attribute means

	Total score	Patient Load	Communication	Independent assessment	Time Management	Support
N	65	68	67	66	69	69
Mean	93.34	16.15	2.00	30.67	17.74	15.74
Mean as %	77.78	80.74	82.99	76.67	70.96	78.70

Table 3. Differences by key attributes in successful transition

Successful Transition		N	M	SD	t	df	One-sided p
Total Score (24 to 120)	No	16	85.563	16.713	-2.964	62.000	.002
	Yes	48	96.375	11.025			
Patient load (4-20)	No	16	14.188	3.410	-2.811	19.340	< .001
	Yes	51	16.745	2.270			
Communication (7-35)	No	16	27.125	4.801	-2.082	19.560	.025
	Yes	50	29.800	3.239			
Ind Assessment (8-40)	No	16	29.125	5.749	-1.675	63.000	.049
	Yes	49	31.408	4.368			
Time Management (5-25)	No	16	15.125	5.045	-3.267	65.000	< .001
	Yes	51	18.627	3.249			
Support (range 4-20)	No	16	14.375	3.722	-1.984	65.000	.026
	Yes	51	16.157	2.935			

Logistic Regression was used to assess the impact of each of the composite variables on the odds ratio (OR) for positive Transition Success (yes/no). Total score was significant at $p = .009$, however each one-point gain in the score only slightly shifted the odds (OR = 1.072) Neither independent assessment nor support had a statistically significant impact. Most impactful were patient load ($p = .004$, OR 1.43), time management ($p = .005$/OR 1.27) and communication ($p = .019$/OR 1.21) (see Table 4).

Table 4. Variables in the equation–Change in odds ratio (transition success) by attribute

		B	S.E	Wald	df	Sig.	Exp(B)
Step 1	Total Score (24 to 120)	0.070	0.027	6.815	1	.009	1.072
Step 1[a]	Patient Load (4-20)	0.290	0.175	2.746	1	.097	1.336
	Communication (7-35)	0.145	0.133	1.194	1	.275	1.156
	Ind Assessment (8-40)	-0.205	0.148	1.936	1	.164	0.814
	Time management (5-25)	0.281	0.147	3.679	1	.055	1.325
	Support (4-20)	-0.109	0.160	0.463	1	.496	0.897
	Constant	-4.342	2.748	2.497	1	.114	0.013

In terms of demographic impact, years of experience was a statistically significant determinant of self-reported readiness: Those with 2-3 years' experience (the highest category for this sample) were significantly different in mean Total Score from both < 1 year and 1 to 2 years with no other differences flagged.

6. DISCUSSION

Different instruments are available to assess the graduate nurse experience, nurse residency programs, and the preceptor relationship, however, an instrument assessing the transition to practice for the NLRN does not exist to the best of our knowledge. In consequence, this study aimed to develop a comprehensive survey instrument that addresses the multi-faceted behaviors and characteristics that would demonstrate a readiness for successful transition to independent practice for the NLRN. While time assured experience, this was not the only variable to be considered when determining a readiness for transition to practice.

Although NLRNs graduate with varied degrees (diploma to bacculaureate degrees) and work in different specialties, the transition to independent practice is of crucial importance to all entry to practice nurses and ultimately patient safety. The elements that support a successful transition include provider competence, confidence, safe practice, and comfort in performing their responsibilities. The Graduate Nurse Transition Success Scale (GNTS) aims to specifically evaluate participants' perceptions of their individualized transition in these areas identified as demonstrated attributes of a NLRN who has successfully transitioned in their practice.

The GNTS scale showed good psychometric properties. The high Cronbach's coefficient ($\alpha = .932$) indicated that the internal consistency of the scale was sound.[20]

Although different transitional support programs have varying duration and content, nurses who have successfully transitioned in their practice exhibit similar characteristics or attributes. The GNTS scale is aimed to measure the achievement of these attributes. Our approach differed from other scales as it is specific to the NLRN competence in their practice.

The tool, when strategically used during an individualized orientation period or graduate nurse success program, may be helpful in identifying individual needs of the NLRN and help provide or withdraw support to facilitate individual success.

6.1 Implications

Evaluation of transition to practice has traditionally been influenced by either length of orientation, a completion of a graduate nurse support program, or a preceptor subjective determination of readiness. These traditional measures have placed NLRNs in situations that they were unprepared, inadequately prepared for, or felt unsafe.

A valid and reliable instrument for such purposes minimizes these concerns by providing an objective quantitative score. This tool provides a compact and focused assessment that measures the confidence of NLRNs in the identified and reaffirmed essential attributes that a successfully transitioned NLRN should possess. Since the instrument has good psychometric properties, it can be recommended for use in graduate nurse support programs to evaluate transitional success and ability to progress to independent practice.

This instrument assists in determining transitional success and identifies if there are barriers to transitional success. The

use of such an instrument also assists in determining the level of support each NLRN requires and provides a more individualized method of assessment. The agency alongside the NLRN can determine the needs of the NLRN and tailor release to independent practice based on individual need.

While this tool is robust in evaluating transitional success, it may be best used as a self-evaluation tool for the NLRN. This scale can be further tested for use in graduate nurse success programs and can be used to tailor unit-specific programs to support newly employed nurses and determine the level of support needed to ensure a safe delivery of care based on the NLRN's knowledge, skills, and attitudes.

6.2 Limitations

The main limitation inherent in this initial study was the relatively small sample size (n = 50). Although the response rate was good their experiences and responses may not be representative of the generalized population. The testing should be replicated with a broader population of NLRNs to determine if similar findings occur. Additionally, as the data was collected via a survey only, participants responses could not be explored for further qualitative insight.

6.3 Conclusion

This paper presented a preliminary validation of the GNTS scale. The findings of this study suggest that the development of a compact, valid, and reliable instrument for evaluation of a successful transition to practice for the NLRN is possible, with positive implications.

This study developed and tested the GNTS scale with a small sample of NLRNs. While internal consistency of the tool was excellent, confirmatory factor analysis needs to be evaluated with a larger sample of NLRNs in other settings and contexts.

AUTHORS CONTRIBUTIONS

Dr. Brown and Nocella participated in the concept development. All authors were responsible for study design, data collection, instrument development and revision. Dr. Brown was responsible for drafting and preparing the manuscript and Dr. Nocella for revising. Dr. Mahon was primarily responsible for data analysis and interpretation. All authors read, discussed, and approved the final manuscript for publication.

CONFLICTS OF INTEREST DISCLOSURE

The authors declare that they have no competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

INFORMED CONSENT

Obtained.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

DATA SHARING STATEMENT

No additional data are available.

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