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**Orientation and Transition Programme Component Predictors of
New Graduate Workplace Integration**

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Aim

To examine relationships between selected components of new graduate nurse transition programs and transition experiences.

Background

Transition support for new graduates is growing increasingly multifaceted; however, investigation of the effectiveness of the constituent components of the transition process is lacking.

Methods

An online survey was disseminated to new graduates working in acute care settings and included questions related to new graduate transition programs. The Casey Fink Graduate Nurse Experience Survey was used to quantify the transition experience.

Results

New graduate nurses who participated in a formal New Graduate (NG) transition program had significantly higher total transition scores than non-program nurses. Orientation length and average number of hours worked in a 2 week period were significant predictors of transition; percentage of preceptored shifts was statistically insignificant.

Conclusions

New graduate transition is enhanced with participation in a formal transition program. Orientation should be at least four weeks in length, and new graduates should work at least 49 hours in a two week period.

Implications for Nursing Management

Nurse Managers are in key positions to advocate for new graduate nurse transition programs with adequate resources to support a four week orientation phase and shift scheduling to ensure an adequate number of hours over two week periods to facilitate transition.

KEY WORDS: New Graduate Nurse, Transition Programs, Orientation, Preceptorship, Survey

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New Graduate Workplace Integration

Introduction

The global nursing shortage has accelerated efforts to ensure a smooth and effective transition of new graduates into the workplace and to their professional nursing role. Unsuccessful transitions result in new graduates leaving the workplace and the nursing profession altogether. Brewer *et al.* (2012) reported that 26% of newly licensed registered nurses had left their first job within two years of starting it and 43% had left within three years. This compares to 7 years ago when 30% of new graduates were reported to have left their first job within 1 year of employment and 57% within the first 2 years (Bowles & Candela, 2005). Although slightly improved, this attrition of new graduates, coupled with the nursing shortage, is a significant concern for nursing management.

Transitional programs have emerged internationally to facilitate and support the development and integration of neophytes into the workplace. Proponents of these programs regard them as essential for new graduates and in some countries such as the United States (US) they have been recommended as standard practice to facilitate new graduate transition (Spector & Echternacht 2010). Others question the need for such programs contending that new nurse graduates should be 'practice-ready' to enter the workforce (Romyn et al., 2009). Despite these differing positions, new graduate transition programs have become commonplace to facilitate the new graduate's integration into the workplace. Yet, evidence has been mixed as to the value of these programs (Evans *et al.* 2008, Levett-Jones & FitzGerald 2005), making it challenging for hospital administrators to decide which programs to support.

Referred to as new graduate programs (Schoessler & Waldo, 2006), residencies (Goode, Lynn, Krsek, & Bednash, 2009), or internships (Blanzola, Lindeman, & King, 2004) transition support programs have been characterized by considerable diversity in duration, structure, content, and financial

support. Programs generally include some combination of the following: formal orientation programs (Beecroft & Hernandez, 2008), formal or informal preceptorships or mentorships (Fox, 2010), supernumerary time (Leigh, Douglas, Lee, & Douglas, 2005), education and study days (Cheeks & Dunn, 2010). Levett-Jones and FitzGerald (2005) concluded that transition programs as a whole and their constituent components have not been studied in a systematic, comprehensive or objective manner to determine their efficacy or cost-effectiveness despite the considerable resources, in some cases estimated to be \$12,000 per New Graduate (Adlam et al, 2009), to implement a transition program. The purpose of this study was to examine the relationships between selected components of formal new graduate transition programs and new graduate transition experiences.

Overview of the Literature

Transition Programs

Orientation Phase. Orientation is the traditional means of assisting a new graduate to transition to practice but has been integrated differently within the context of new graduate transition programs. In some programs additional new graduate nurse support is considered to be an extended orientation period and overlaps with, or constitutes the transition program in its entirety (Park & Jones 2010). In other programs it represents the beginning phase of a transition program and is considered separate from the additional support of a new graduate transition program (Spector & Echternacht 2010). This blurring of the orientation and transition phases makes it difficult to determine their independent contributions on the new graduate's transition experience.

Few studies have examined the orientation phase as a separate phase of new graduate transition programs (Blanzola *et al.* 2004, Kowalski & Cross 2010, Leigh *et al.* 2005, Marcum & West 2004, Murphy *et al.* 2004). Orientation typically consists of a general orientation to the organization followed by a more specific unit orientation (Gavlak, 2007). The length of the orientation phase of a transition program has varied from less than 4 weeks to more than three months; some evidence has

suggested longer orientations that meet the new graduate's needs result in better satisfaction and retention (Scott *et al.* 2008). 'Supernumerary time,' or time for new graduates to become immersed in their new role without workload pressures (Adlam *et al.* 2009), is a standard orientation component, varying in terms of length and amount of preceptored shifts, yet little is known about its influence on transition.

Transition Phase. Following the orientation phase, transition programs typically provide an extended period of support, that may involve periodic educational sessions or pairing with a mentor, who provides non-clinical, non-evaluative support (Beecroft *et al.* 2006). The transition phase for new graduates may be affected by the number of hours worked and the growing trend of new graduates working on a part-time or casual basis with no regular work hours and short notice call relief (Sedgwick & Rougeau, 2010). This may mean more limited exposure to the professional nurse role and slow transition. Little is known about how work status and hours worked may impact the new graduate's transition.

Outcomes. Research that has investigated outcomes of new graduate transition programs has been limited primarily to retention (Anderson, Linden, Allen, & Gibbs, 2009), turnover (Fox, 2010), and job satisfaction (Altier, & Krsek, 2006). The implementation of a formal transition program has been shown to consistently improve an organization's new graduate retention and turnover rates (Almada *et al.* 2004, Anderson *et al.* 2009). Despite this consistency, retention and turnover represent indirect measures of successful transition. More indicative of transition are comfort and confidence with the direct scope of practice roles and responsibilities of a new nurse graduate such as skill performance, relationships with colleagues, communicating with physicians, workload demands, and organization and prioritization which new graduate nurses often have trouble with at various points throughout the first year of practice (Boychuk-Duchscher 2008). Few studies have examined the impact of a transition program on outcomes more specific to the transition experience itself. The exception is a series of

studies related to the U.S. national post baccalaureate nurse residency program established by members of the University Health System Consortium/American Association of Colleges of Nursing partnership (Altier & Krsek, 2006; Casey et al., 2004; Fink et al., 2008; Goode et al., 2009; Krugman et al., 2006; Pine & Tart, 2007). A recent study by the Consortium showed statistically significant increases in new graduate residents' overall comfort and confidence in organizing and prioritizing their work, communicating with team members, patients, and families, and providing clinical leadership on their units, while experiencing a decrease in their stress scores (Goode *et al.* 2009). However, outcomes were evaluated primarily using descriptive or longitudinal designs and lacked comparison of new graduates participating in a transition program with those not supported by a formal transition program. Methodological limitations further limit conclusions that can be drawn about the impact of new graduate transition programs on transition processes and outcomes. This research study is an advance on other studies by allowing for such a comparison.

Aim of the Study

The purpose of this study was to examine relationships between components of formal new graduate transition programs and new graduate transition experiences. This study differs in three primary ways from other studies. First, it conceptualizes orientation as a separate phase of a transition program allowing for an examination of the individual contributions of the two phases on NGs experiences. Second, it obtains a more direct measure of roles and responsibilities specific to new nurses. Third, it compares differences between new graduates participating and not participating in a transition program. For the purpose of this study, orientation was defined as a period to familiarize staff with a new work environment, related expectations, and policies and included clinical support through a supernumerary period. A transition program was defined as a program that occurred in addition to a general and/or specific unit orientation and was designed specifically to assist new nurse graduates with their transition to practice. Time frames for orientation and transition program phases varied across the

five health authorities in British Columbia (BC), Canada reflecting differences in their fiscal budgets and resource allocation to program components.

The following questions guided the study:

1. Is there an association between length of orientation and total/subscale transition score for NG nurses who received a unit-specific orientation from their employer?
2. Is there an association between the amount of preceptored shifts NG nurses received during the unit-specific orientation and their total/subscale transition score?
3. Is there an association between NG nurses' participation in a formal transition program and their total/subscale transition score?
4. For NG nurses who worked the same average number of hours in a 2 week period, is there an association between their employment status and their total/subscale transition score?
5. What are the relative contributions of length of orientation and participation in a formal transition program to the total transition score of NG nurses?

Methodology

Design

The quantitative findings reported are part of a larger mixed methods study designed to provide a comprehensive assessment of new nurse graduate transition best practices in several BC hospitals, across seven health authorities, from the perspective of multiple stakeholder groups (Doyle *et al.* 2009). Program related findings from the online survey of new graduates are presented.

Sample

Following ethics approval from two BC University Ethics Review Boards (UBC Okanagan H11-00444) and seven BC health authorities, sample recruitment began. The project's working-steering committee consisted of representatives from each health authority in BC, who assisted in the identification of BC NGs who graduated in 2010 (n=1,008) and were working in acute care. Recruitment

of the sample consisted of mechanisms internal to each health authority and included a letter of information, invitation to participate, and consent process sent via email. A link to an online survey was included within the letter of information, and participant consent was implied via survey completion. Each eligible new graduate nurse was sent at least one follow-up email reminder. Each health authority was represented in the sample of respondents, with rates ranging from as low as 7% to as high as 57%, with an overall 26% response rate.

Data Collection

The quantitative component of the project involved administration of an online survey (The Canadian-based company, Fluid Surveys), that consisted of five sections: demographics, orientation to the employer/nursing unit, general transition, specific new graduate nurse transition program, and the Casey-Fink Graduate Nurse Experience Survey (Casey *et al.* 2004). Prior to administration, the survey was pilot tested with nine new graduates for clarity of instructions and items, readability, and time to completion with minor changes based on their feedback. The survey was administered from mid-June to mid-July 2011. Demographic information included age, gender, employment/work status, and previous health experience (eg. volunteer, nursing assistant, Licensed Practical Nurse). Questions related to the orientation phase asked if new graduates had received an orientation, its length (none, < 2 wks, between 2-4 wks, > 4 wks) and the percentage of preceptored shifts it involved (none, ≤25%, 26-50%, 51-75%, > 75%). General transition questions asked new graduates when they experienced the greatest need for support, during their time of greatest need how often they were able to access support; and if they had experienced any bullying and/or harassment in the workplace as a new graduate nurse. Specific transition program questions asked about length, and the helpfulness of educational and people resources.

The Casey-Fink survey instrument, originally developed in 1999 and revised in 2002, was utilized to quantify a new graduate nurse's transition experience (Goode *et al.* 2009). Used extensively in US

new graduates working in hospital settings, it is a 24-item, 4-point summative scale (1=strongly disagree; 2=disagree; 3=agree; 4=strongly agree), consisting of 5 subscales - organizing/prioritizing, communication/leadership, support, stress, and professional satisfaction (Casey *et al.* 2004). In the current study, four of the five transition subscales showed convergent and divergent validity; the single-item stress subscale could not be assessed. The subscales demonstrated satisfactory or nearly satisfactory Cronbach's alpha internal consistency reliability - priority setting/organizing subscale (.75), communication/leadership (.70), support subscale (.83), and professional satisfaction subscale (.69), approximating those reported in other studies.

For each nurse, the total transition score was derived by summing the scores to all 24 questions of the Casey-Fink survey while subscale transition scores were derived by totalling the scores of relevant subscale items. Higher total and subscale transition scores, reflected better overall transition and transition related to specific elements, respectively. Missing responses for individual questions were replaced with the median value for that item computed from responses from the other nurses.

Data Analysis

Descriptive statistics (i.e., frequencies and percentages) were used to summarize the distribution of relevant demographic variables. One-way analyses of variance were employed to assess the effect of length of orientation on the total and subscale transition scores and to elucidate whether the percentage of NG shifts that were preceptored during the orientation period had an effect on these scores. Where appropriate, these analyses were followed by Tukey's post-hoc comparisons which isolated the nature of these effects. Independent two-sample t-tests were used for comparing the mean value of the total/subscale transition scores among nurses whose organization provided them with a formal NG transition program compared with those whose organizations did not. Chi-square test was used to compare differences in baseline characteristics between nurses who received a formal NG transition program and those who did not receive such a program. Multiple regression analyses were

conducted to explore to what extent the new graduate's employment status and number of hours worked in a 2 week period affected their transition experience. A two-step hierarchical regression analysis related total transition score to length of orientation at step 1, and to participation in a formal transition program at step 2 to reflect their temporal sequencing. The Statistical Package for Social Sciences for Windows (SPSS) version 12.0 (SPSS Inc., Chicago, IL, USA) was used for the implementation of the hierarchical regression analyses and the open source statistical software package R version 2.13.0 (R Foundation for Statistical Computing, Vienna, Austria) was used for all other analyses.

Findings

Description of Sample

Two hundred and forty-five NG survey participants were retained for the statistical analyses [Insert Table 1 here]. Participants varied in age; over half falling in the 25 to 35 year range. The majority (90.6%) were female. Slightly less than half of the participants (46.9%) had worked for more than a year as a newly graduated nurse, whereas 39.2% of the participants had worked between 6 months to one year and 12.7% had worked for less than 6 months in this capacity. The largest proportion were working casual (36.7%), followed closely by 30.2% working in permanent full time positions. Sixty percent worked between 49 to 80 hours on average over a two-week period and half worked 25% to 50% of their hours over a 2-week period on nights.

Orientation Phase

Length of Orientation: One hundred and seventy-four of the nurses had received a unit specific orientation from either their current (n=167) or previous employer (n=7) [Insert Table 2 here]. Of these, 44.8% reported having an orientation that lasted 2 weeks or less, 27.6% reported having an orientation that lasted more than 2 weeks but less than 4, and 27.6% reported having an orientation of 4 weeks or more. Over half of NGs (52.30%) had more than 75% preceptored shifts.

A one-way analysis of variance demonstrated that length of orientation was significantly related to the new graduate nurses' total transition score (P-value=0.0002). Tukey's post-hoc comparisons indicated that, on average, the nurses who attended an orientation of 4 weeks or more had a significantly higher total transition score (Mean=76.46, SD=8.04) than nurses who had orientations of either 2 weeks or less (Mean=70.16, SD=8.98) or more than 2 weeks but less than 4 (Mean=71.84, SD=7.05). Specifically, total transition scores of nurses who had orientations of 4 weeks or more were on average 6.30 points higher than those of nurses who had orientations of 2 weeks or less (P-value=0.0001; 95% CI: 2.74 to 9.85) and 4.62 points higher than those of nurses who had orientations lasting more than 2 weeks, but less than 4 weeks (P-value= 0.0172; 95% CI: 0.67 to 8.57). On average, no significant difference was found between the total transition scores of the nurses who attended an orientation lasting 2 weeks or less or more than 2 weeks, but less than 4 (P-value= 0.5016).

Similar analyses revealed that the nurses whose orientation lasted 4 weeks or more significantly outperformed the other nurses on the communication/leadership score (P-value=0.0152), the support score (P-value<0.0001) and the professional satisfaction score (P-value=0.004). In contrast, there was no statistically significant association between length of orientation and new graduate nurses' priority setting/organizing score (P-value=0.1407) and stress score (P-value=0.9822). [Insert Table 3 here.]

Amount of Preceptored Shifts. A one-way analysis of variance showed no statistically significant association between the amount of preceptored shifts, expressed as a percentage, that NG nurses had during their unit-specific orientation and their total transition score (P-value=0.3668). Similarly, no statistically significant associations were found between preceptorship amount and NG nurses' priority setting/organizing score (P-value = 0.517), communication/leadership score (P-value = 0.767), support score (P-value = 0.185), stress score (P-value = 0.343) and professional satisfaction score (P-value = 0.706).

Transition Phase

New Graduate Program Participation vs Non-Participation. Nearly 60% of new graduates reported that their organization provided a formal new graduate nurse transition program. The total transition scores ranged from 49 to 95 with a mean of 72.03 (SD = 8.66) for the 245 nurses.

A series of independent two-sample t-tests compared mean total/subscale transition scores for nurses who participated in a formal NG transition program (n = 144) and those who did not (n = 101) . [Insert Figure 1 here]. On average, new graduate nurses who participated in a formal NG transition program had significantly higher total transition scores (Mean=74.20, SD= 8.18) than nurses who lacked such a program (Mean=68.93, SD= 8.41; Test Statistic = 4.9072, D.F. = 243, P-value < 0.0001). The mean total transition score for the nurses in a formal NG transition program was 5.27 points higher (95% CI: 3.16 – 7.39) than that for non-participating nurses. Similarly, having a formal NG transition program was associated with higher organizing/prioritizing scores (Mean=15.26, SD=2.30 vs Mean=14.61, SD=2.05; P-value= 0.0254), communication/leadership scores (Mean=18.33, SD =2.23 vs Mean =17.26, SD=2.22; P-value= 0.0002), support scores (Mean=27.95, SD=3.76 vs Mean=25.42,SD=4.10; P-value<0.0001), and professional satisfaction scores (Mean=10.08, SD =1.56 vs Mean=9.21, SD=1.76; P-value<0.0001), than not having a program. The stress score showed no significant difference between new graduates having a formal NG transition program and those not having a program (P-value=0.1566).

Without randomization, equivalency of groups could not be assumed. Chi-square testing established that there was no significant difference in age, gender, previous health care experience, employment status, average number of hours worked in a 2 week period and percentage of night shifts over a 2 week period between the nurses who participated in a formal NG transition program and those who did not. There was, however, a significant difference between these two groups of nurses in terms of their length of employment as newly graduated nurses (P-value= 0.0157), where length of employment was categorized as “less than 6 months”, “6 months to 1 year”, or “more than 1 year”.

After controlling for length of employment, multiple linear regression revealed that nurses who participated in a formal NG transition program (Mean= 74.20, SD= 8.18) had significantly higher scores than those who did not (Mean= 68.93, SD= 8.41; P-value<0.0001). Among nurses having the same length of employment (e.g., more than 1 year), the mean total transition score for nurses who participated in a formal NG transition program was 4.74 points higher (95% CI: 2.60 – 6.88) than that for non-participating nurses.

Multiple linear regression also established that, after controlling for length of employment, participation in a formal NG transition program was associated with significantly higher communication/leadership scores (Mean= 18.33, SD= 2.23 vs Mean= 17.26, SD= 2.22; P-value= 0.0029), support scores (Mean=28.00, SD=3.76 vs Mean=25.42, SD=4.10; P-value<0.0001) and professional satisfaction scores (Mean= 10.08, SD= 1.56 vs Mean= 9.21, SD= 1.76; P-value= 0.0002) . No significant association was found between participation in a formal NG transition program and the transition scores pertaining to organizing/prioritizing (P-value= 0.0949) and stress (P-value= 0.3070) when controlling for length of employment. [Insert Table 4 here]

Employment Status and Work Hours over 2 Weeks. Multiple linear regression modeling revealed that, after controlling for employment status, NG nurses who worked an average of 49 hours or more in a 2 week period had significantly higher total transition scores (Mean=72.99, SD=9.05) than those who worked 48 hours or less (Mean=69.57, SD=7.06; P-value=0.006). In particular, among NG nurses with the same employment status, the mean total transition score of those who worked an average of 49 hours or more over a 2 week period was 3.62 points higher than that of NG nurses who worked an average of 48 hours or less during that period (95% CI: 1.05 to 6.20).

Similar analyses established that, after controlling for employment status, NG nurses who worked an average of 49 hours or more in a 2 week period had significantly higher priority setting/organizing scores (Mean=15.20, SD=2.32 vs Mean=14.45, SD=1.84; P-value=0.0055) and

communication/leadership scores (Mean=18.18, SD=2.40 vs Mean=17.16, SD=1.76; P-value=0.0028) than those who worked 48 hours or less. Specifically, for NG nurses having the same employment status, the mean value of the priority setting/organizing score was 0.94 points higher (95%: 0.28 to 1.60) and that of the communication/leaderships scores 1.04 points higher (95%: 0.36 to 1.71) for the nurses who worked an average of 49 hours or more in a 2 week period compared to nurses who worked 48 hours or less. [Insert Table 5 here]

Contributions of Orientation and Transition Program Phases. A two-step hierarchical regression of total transition score on length of unit-specific orientation and participation in a formal NG transition program was performed (n = 174). Length of orientation was entered at step 1, where it explained 8.6% of the variability in the total transition scores ($F(1,172) = 16.276$, P-value < 0.001). Participation in a transition program was entered at step 2, where it explained an additional 6.5% of the variability in the total transition scores ($F(1,171) = 13.1$, P-value < 0.001). This suggests that length of unit-specific orientation was a slightly stronger predictor of total transition scores than participation in a formal NG transition program.

Discussion

This is one of few studies to examine orientation as a specific phase of a transition program and to examine its association with new graduate transition. Of the two orientation components that were examined, length made a difference in new graduate transition with orientations of 4 weeks or more significantly improving the transition experience, and specifically in relation to communication/leadership, support, and professional satisfaction. This contrasts with other studies in which transition programs with orientations of less than four weeks showed improvements in competency and critical thinking (Blanzola *et al.* 2004, Kowalski & Cross 2010, Leigh *et al.* 2005, Marcum & West 2004, Murphy *et al.* 2004). Use of the Casey-Fink survey to quantify transition experiences, makes it difficult to compare current findings with other studies that used indirect measures to quantify

transition. A longer orientation appeared to improve new graduates ability to relate to their patients, other professionals, their support system and their jobs. This outward “relational effect” may be more critical to transition than shorter orientations, which may limit improvements solely to intellectual competencies, such as ability to plan and prioritize. It is of concern that over half of participants (55%) in the current study reported orientation lengths less than 4 weeks and nearly one third of NGs reported not having an orientation given the value found in longer orientations (Scott *et al.* 2008).

Dedicated preceptored shifts are an important feature of most transition programs. In this study preceptorship was part of the supernumerary time of the orientation phase that allowed NG’s immersion in their role yet, the volume of preceptored shifts had no significant impact on transition experiences. These findings suggest that the value of the preceptorship may lie less in the quantity and more in the quality of the time spent with the preceptor. Preceptor training has been associated with new graduate improvements in critical thinking (Sorensen & Yankech 2008), satisfaction with their preceptored experience (Baggot *et al.* 2005), and new graduate retention (Pickens & Fargotstein 2006). Preceptor training is all the more important given the reality of practice environments characterized by high acuity, rapid turnover, and competing demands that often make achieving 100% of preceptored shifts difficult. Over half of NG participants in this study reported less than 75% of their shifts preceptored and a startling 33% had less than a quarter of their shifts preceptored or had no preceptor pairing at all. Improvements in the quality of the preceptored experience through training may offset the need for so much attention on the quantity of preceptored shifts.

Participation in a transition program compared to non-participation clearly had benefits for new graduate transition with improvements in planning and prioritizing, communication and leadership, support, and professional satisfaction. This supports other work showing increased competency as a result of a transition program regardless of duration, or type (Goode *et al.* 2009, Komaratat & Oumtane 2009, Beyea *et al.* 2007). In particular the findings resonate with the positive outcomes Goode *et al.*

(2009) observed in new graduates involved in a residency program. Although the significant between-group difference in length of employment, might suggest a confounding effect, new nurse program participants had higher transition scores than non-program participants even when they had similarities in amount of time they had worked as new graduates (e.g., 6 months – 1 year). These findings suggest that transition programs expedite the transition process, allowing new graduates to make more rapid gains in communication/leadership, development of a support network, and in achieving professional satisfaction.

A very significant finding from the current study was that the more hours new graduates worked (> 49 hours) in a two week period, the better their transition. This makes intuitive sense since new graduates are more immersed in the practice culture with opportunities to expand their scope of practice. Over a third of new graduates in the current study worked short notice call relief with no regular work hours, and this growing casual trend limits their number of work hours and threatens their integration and transition to the workplace (Baumann *et al.* 2011). Findings from this study suggest that more than four 12-hour, or six 8-hour shifts, or some combination of the two during a two week period is necessary to facilitate new graduate transition.

The findings from this study offer unique insights into the role played by the orientation and transition phases of new graduate nurses' integration into the workplace. Each phase had a small, but significant association with new graduates' integration into the workplace. New nurse graduates who received orientation only did not gain the additional benefit afforded by the transition support program. Among NG nurses who received orientation, those who attended a formal NG transition program tended to have higher total transition scores than those who did not. Together, length of orientation and participation in a transition program explained 15.1% of the variability in total transition scores. The considerable amount of unaccounted variability in these scores suggests that it may be worthwhile to

include other variables (eg. demographic) in the hierarchical regression or perhaps represent the orientation phase via more than one descriptor.

A limitation to this investigation may be the collection of data at only one point during transition, approximately 12 months post-graduation. Collecting data at multiple times during the new graduates first year would provide an ongoing assessment of changes in the experience over time. The low response rate of 26% of the 1,008 NG nurses who were targeted for recruitment may have resulted in a biased sample with detection of differences between respondents and non-respondents not possible due to organizational constraints. The large amount of unexplained variance in transition scores suggests that a further limitation was focusing the scope of the study to capture all the necessary variables (predictors)/confounding variables.

Implications for Nursing Management

New graduates who participated in a formal transition program had smoother transitions than their non-participant counterparts and had gained the competencies that are often expected of neophytes, such as organizing, prioritizing, communicating and demonstrating leadership. The value of new graduate transition programs in helping ready new graduates for practice has important implications for stakeholders at all organizational levels. In these times of fiscal constraints hospital administrators may have to be strategic and dedicate financial support and resources to specific transition program components, such as a minimum four week orientation and a guaranteed 49 hours of work over a 2 week period during the first few months of employment. Although annual cost savings ranging from \$330,481 (Marcum & West, 2004) to \$1,040,153 (Fox, 2010) for transition programs as a whole have been documented, a focus on specific program components with evidential support may produce long term returns on investment (Pine & Tart, 2007).

Nurse Managers and Unit Educators can maximize the value of unit orientation by ensuring it is structured, and focused on “transition” competencies including effective communication between staff

and Nurse Managers. Additionally, instead of struggling to find preceptors to shadow every new graduate during orientation, nurse managers might shift their focus to ensuring that preceptors are well-trained and that nurse graduates and their preceptors have opportunities for quality interaction and support. Further, Nurse Managers are encouraged to work with new graduates to ensure they are receiving an adequate number of work hours within a two week period to facilitate their transition. For example, they might consider flexible job arrangements (Zeytinoglu, Denton, & Plenderleith, 2011), that take advantage of new graduates wanting more hours and nurses nearing retirement wanting fewer hours, all negotiated within the conditions stipulated in collective agreements. Arrangements that maximize experienced nurse mentorship of new graduates (Bellefontaine & Eden, 2012) may be mutually beneficial.

Conclusions

In conclusion, orientation and transition program phases offer unique contributions to new graduate transition. Findings revealed that participation in a formal new graduate transition program improved the transition experience. Transition improved when orientation was 4 weeks or more, but was not related to the percentage of shifts that were preceptored. Within the context of transition, the greater the number of hours worked in a two-week period, the better the transition.

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