CE 1.0 ANCC Contact Hour

Traditional and Accelerated Baccalaureate Nursing Students' Self-Efficacy for Interprofessional Learning

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Abstract

AIM The aim of the study was to examine self-efficacy among traditional and accelerated nursing students with regard to interprofessional learning.

BACKGROUND The World Health Organization and other organizations recognize the need for interprofessional education to prepare health care providers for collaborative practice. Graduates of baccalaureate nursing programs require competence in interprofessional collaboration and communication.

METHOD Traditional (n = 239) and accelerated (n = 114) nursing students' self-efficacy was measured utilizing Mann et al.'s Self-Efficacy for Interprofessional Experiential Learning Scale.

RESULTS Accelerated students averaged significantly higher than traditional students on the interprofessional team evaluation and feedback subscale (p = .006) and overall self-efficacy (p = .041).

CONCLUSION Awareness of possible differences between traditional and accelerated nursing students with regard to self-efficacy may help faculty develop effective interprofessional learning experiences for students in each cohort. Although results cannot be generalized, findings from this study provide evidence to guide the selection of learning strategies.

KEY WORDS Accelerated Nursing Students – Interprofessional Education – Nursing Education – Self-Efficacy – Traditional Nursing Students

The World Health Organization (WHO, 2010) states that "interprofessional education occurs when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes" (p. 7). Further, WHO asserts that interprofessional education (IPE) is essential to the preparation of a health care workforce ready for collaborative practice. Contemporary health care delivery models highlight teamwork (National Academies of Practice, 2011). It is considered essential that graduates of baccalaureate nursing programs demonstrate competence in interprofessional collaboration and communication (American Association of Colleges of Nursing, 2008). The Interprofessional Education Collaborative Expert Panel (2011) asserts that health professions students must be afforded opportunities to serve as clinical team members during their education.

Given the need for teamwork in contemporary health, it is important to examine nursing students' levels of self-efficacy with respect to interprofessional learning. The current study explored perceived self-efficacy for interprofessional, experiential learning among senior traditional and accelerated nursing students.

BACKGROUND

A recent systematic review of the effectiveness of IPE revealed a potential positive effect on students' attitudes regarding interprofessional collaboration and ability to make clinical decisions (Lapkin, Levett-Jones, & Gilligan, 2013). Many types of IPE interventions have been evaluated, showing positive effects. Interventions include interprofessional clinical learning experiences (Hallin, Kiessling, Waldner, & Henriksson, 2009; Joseph, Diack, Garton, & Haxton, 2012; Pelling, Kalen, Hammar, & Wahlström, 2011), clinical simulation (Berg, Wong, & Vincent, 2010; Tofil et al., 2014), and the incorporation of case-scenario-based interprofessional learning experiences in clinical practice settings (O'Carroll, Braid, Ker, & Jackson, 2012).

When developing IPE strategies for nursing curricula, it is important to consider that baccalaureate nursing students are not a homogeneous group. Some students pursue an initial BSN degree in traditional, four-year nursing programs. Others who already hold nonnursing baccalaureate degrees pursue their BSN degrees through accelerated programs, most of which involve 12 to 18 months of coursework (Penprase & Koczara, 2009).

Seldomridge and DiBartolo (2005) studied a group of 71 accelerated nursing students and reported that, like their counterparts in traditional nursing programs, the majority were female, younger than 30, and largely European American. Compared with traditional students, however, there were more male students, somewhat greater ethnic diversity, and stronger academic performance in the accelerated group. Following a review of the literature, Penprase and Koczara (2009) concluded that accelerated students are typically independent, self-motivated learners, and many have experience with delegation and leadership.

Pettigrew, Dienger, and King (2011) found that traditional and accelerated students differed in their ratings of teaching methods. Traditional students assigned higher ratings to lectures accompanied by PowerPoint slides and to viewing videos in class; accelerated students, on the other hand, highly rated online discussions and chats as well as problem-based learning. Pettigrew and colleagues also noted that the groups differed significantly in how they rated the pace of instruction; 43 percent of accelerated students rated content

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delivery as too fast in contrast to 27 percent of traditional students. These findings suggest that students in each cohort may encounter different challenges when pursuing the BSN degree.

LITERATURE REVIEW

A search was conducted of literature published between 2009 through mid-2015 utilizing CINAHL and PubMed databases and the following MESH key words: *education, interdisciplinary and students and self-efficacy,* or *confidence.* This search revealed 65 published articles. The researcher reviewed titles, abstracts, and/or articles for relevance and excluded reports that solely addressed graduate education or practicing professionals or did not identify the inclusion of undergraduate nursing students in the sample of interprofessional students. Although none of the reviewed reports specifically addressed the current research topic, the researcher found some knowledge related to students' experiences with interprofessional learning and self-efficacy or confidence.

Eccott et al. (2012) evaluated the effectiveness of an interprofessional, problem-based learning experience. After the experience, a significant increase was found in students' confidence about understanding their profession's role on the interprofessional team. McAllister et al. (2014) examined clinical confidence among students who were planning to work on interprofessional teams in mental health care. Although not all participants completed the three posttests, the researchers found a significant increase in clinical confidence immediately following participation in a two-day interprofessional workshop and at subsequent assessments conducted one month and three months later.

The literature reveals numerous examinations of IPE delivered through the use of clinical simulation. Research shows that, after participation in interprofessional clinical simulation, students reported greater confidence with respect to communication (Liaw, Zhou, Lau, Siau, & Chan, 2014). Smithburger, Kane-Gill, Kloet, Lohr, and Seybert (2013) found an increase in students' confidence with regard to caring for a patient as part of a team. Tofil et al. (2014) reported improved confidence with respect to correcting a colleague in a collaborative way following simulation experiences. They also found that self-efficacy significantly increased, and nursing students in the sample expressed more confidence in their ability to discern their role on the team.

Scherer, Myers, O'Connor, and Haskins (2013) examined the effect of an IPE simulation and noted significant improvement in confidence among students. Interestingly, students who were assigned to an intraprofessional control group also showed significant improvement in confidence after simulation. Researchers also investigated IPE that included both didactic instruction and simulation; findings reveal increased self-efficacy (Brock et al., 2013) and greater clinical confidence (Lewis, 2011). Following IPE related to emergency preparedness, which included clinical simulation among other learning strategies, researchers found improved confidence in a number of domains, including communication (Miller, Rambeck, & Snyder, 2014).

Mixed findings have also been reported. Luctkar-Flude et al. (2014) found that following participation in an interprofessional simulation addressing infection control, students expressed confidence regarding most infection control skills; however, nursing students were significantly less comfortable than other students in terms of stating their own opinions in a group setting. In another study, students who participated in two interprofessional pediatric simulations were found to lack confidence carrying out pediatric skills; however, their team skills improved significantly (Luctkar-Flude et al., 2013).

Evidence also exists regarding other forms of IPE simulation. Efstathiou and Walker (2014) reported improvements in students' confidence regarding communication during end-of-life care after viewing and discussing three recorded simulation scenarios. Solomon and Salfi (2011) studied IPE that included interviewing a standardized patient. Qualitative data indicated that students viewed the experience as an opportunity to develop confidence with respect to communication and professional roles.

Interprofessional learning also occurs through clinical experience. Stephens, Abbott-Brailey, and Platt (2011) studied the perceptions of students from three health professions following placement on a critical care unit and weekly interprofessional team meetings. Qualitative data suggested the experience promoted interpersonal confidence. Allen, Smart, Odom-Maryon, and Swain (2013) examined perceived cultural competence among students following participation in an interprofessional immersion experience in Peru. They found an increase in cultural competency, noting that this finding reflected enhanced self-efficacy with regard to cultural competence.

Overall, the literature reflects numerous efforts to develop and evaluate IPE interventions, many of which involve experiential learning. Given the essential nature of interprofessional learning in the preparation of registered nurses, it is important to consider how nursing students approach this critical aspect of their education. No published studies were found that revealed whether or not traditional and accelerated baccalaureate nursing students differ in their perceived self-efficacy for interprofessional experiential learning. The current study was designed to answer this question, with a view toward helping inform nursing faculty development of interprofessional learning experiences in order to promote readiness for collaborative practice among students in both cohorts.

THEORETICAL FRAMEWORK

Bandura's (1977) self-efficacy theory formed the basis for this study. Perceived self-efficacy refers to an individual's appraisal of his or her capability to perform activities necessary to manage life's varying circumstances (Bandura, 1982). Perceived self-efficacy influences the degree of effort and perseverance an individual will sustain when confronted with obstacles or stress (Bandura, 1977).

According to Bandura's (1977) self-efficacy theory, people tend to confidently participate in activities when they view them to be within the scope of their ability; conversely, they tend to refrain from participating in activities they view as beyond the scope of their ability. Bandura further asserted that these expectations may influence the willingness to put forth effort and persevere when difficulties arise; positive expectations are likely to inspire greater effort and perseverance. Although Bandura acknowledged that the possession of requisite abilities and the presence of sufficient incentive also influence performance, he considered perceived self-efficacy to play an important role in shaping behavior.

Measurement of self-efficacy could enhance understanding of interprofessional learning and possibly serve as a predictor of the willingness to persevere with interprofessional learning and practice (Mann et al., 2012). The current investigation was part of a mixed-method study. The first phase was a quantitative investigation of perceived self-efficacy; the second phase was a qualitative exploration of students' experiences with interprofessional learning. This report presents findings from the quantitative phase of the research.

Baccalaureate nursing students encounter numerous challenges as they advance through their nursing education. The available literature suggests that traditional and accelerated nursing students may differ in terms of the situations that each cohort finds challenging. Understanding similarities and differences in perceived self-efficacy between traditional and accelerated nursing students could provide nurse faculty with evidence to guide the development, selection, and implementation of interprofessional learning experiences to promote mastery and readiness for interprofessional practice upon graduation.

METHOD

This descriptive phase of the study involved the collection of demographic data and measurement of self-efficacy for interprofessional experiential learning among students in two cohorts. Five universities in a northeastern state were selected as potential research sites; they were selected due to their ability to provide access to students in both traditional and accelerated nursing programs and to promote the inclusion of students from both public and private institutions.

The researcher secured institutional review board approval from four of the five selected institutions. The fifth institution accepted prior institutional review board approval from another participating university and did not require an independent review. The researcher then proceeded to contact the dean or department chair of each program to request permission to visit the campus to invite senior nursing students to participate in the study. Inclusion criteria were as follows: a) enrollment in the senior year of a selected traditional or accelerated baccalaureate nursing program, b) ability to read and speak English, and c) at least 18 years old.

Instruments

The researcher developed a brief demographic questionnaire to elicit information regarding students' age, gender, ethnicity, and highest degree earned. Since prior participation in IPE and interprofessional practice (IP) could influence responses, the researcher also included the following questions: a) Have you participated in interprofessional education during your current nursing program? b) Did you engage in interprofessional practice in a clinical setting prior to starting your nursing program? Space was provided for respondents to enter a brief description of their prior experiences.

To collect quantitative data regarding self-efficacy for interprofessional experiential learning, the researcher utilized the Self-Efficacy for Interprofessional Experiential Learning (SEIEL) Scale (Mann et al., 2012), with permission. The SEIEL is a 16-item instrument; each item identifies an aspect of the student role vis-à-vis interprofessional experiential learning (e.g., "working with other students from different professions to form a team" and "interacting with students from other professions and disciplines than my own" (p. 95). In response to each item, participants are instructed to circle the number on a 10-point scale (1 = low, 10 = high) that best reflects their degree of confidence regarding their ability. Mann and colleagues established content validity of the SEIEL through review of the scale by experts; they also reported Cronbach's alpha of .96 for the instrument as a whole.

Evaluation of construct validity led Mann and colleagues (2012) to identify two subscales, each comprising eight items. The Interprofessional Interaction subscale reflects activities such as working, interacting, problem solving, planning care, and learning with students from other professions. The Interprofessional Team Evaluation and Feedback subscale reflects activities such as giving feedback to the team and individual members, understanding and explaining interprofessional learning and the role of the team, and evaluating the team's performance.

Data Collection

The deans or department chairs at four of the five selected institutions granted the researcher permission to recruit participants. The fifth institution declined to participate in the study. The researcher contacted faculty teaching senior students at each of the four participating universities to request permission to visit classes to invite senior students to participate in the study. The researcher visited three of the four participating universities to circulate the consent form and the paper-and-pencil questionnaires to students who met inclusion criteria. A faculty member from the fourth university circulated the materials to eligible students at that institution.

The consent form explained that participation in the study was voluntary and not a component of any coursework, students were free to ask questions about the study, and completion of the questionnaires would constitute consent to participate in the quantitative phase of the research. The form also instructed students to enter their honest responses and to submit the questionnaires anonymously. Completion of both the demographic questionnaire and the SEIEL took approximately 10 minutes.

Sample

The sample included senior traditional and accelerated nursing students at the four participating universities. Accelerated students enrolled in one or more senior-level nursing courses were considered to be at the senior level. Seniors were selected for the survey because the researcher believed they were more likely than junior-level students to have experience with interprofessional learning.

The data collection period spanned from February through mid-June 2015. All senior-level traditional and accelerated students at the four institutions were invited to participate in the study, with the exception of students who were absent from class at the time of the data collector's visit. Altogether, 385 students were invited to participate in the study; of these, 258 were enrolled in traditional programs and 127 were enrolled in accelerated programs. The sample included students from both the state university system and private institutions. A power analysis indicated the sample had a power of 0.8 to detect a standardized difference of 0.3 using a two-tailed test with an alpha level of .05.

Statistical Analysis

Descriptive statistics included means and standard deviations for continuous variables and frequencies and percentages for categorical variables. Baseline group differences were tested using an independent samples *t*-test for continuous variables and cross-tabulation chi-square test for categorical variables. For the self-efficacy total score and subscale scores, independent samples *t*-tests were performed. A multilevel analysis with students nested within schools revealed near-zero intraclass correlations so the *t*-test was deemed suitable. Pearson correlations were run to determine which demographic characteristics were related to self-efficacy. An alpha level of .05 was used, and the analyses were conducted in SPSS version 22.

RESULTS

Of the 385 students invited to participate in the study, 354 submitted questionnaires, for a response rate of 91.9 percent. One respondent

completed the demographic questionnaire but did not complete the SEIEL. Consequently, results related to the SEIEL are based on a total sample of 353 subjects (239 traditional; 114 accelerated).

Table 1 shows the demographic characteristics of the sample by program type. The sample was overwhelmingly female (89 percent) with significantly more female students enrolled in the traditional program ($p = .002$). The majority of students were Caucasian (85 percent), and there was a significant difference between programs in ethnic composition ($p = .001$); the greatest disparity was the difference in the number of African Americans between the accelerated and traditional programs. Accelerated students were significantly older ($p < .001$) and more likely to have obtained a college degree ($p < .001$). About one quarter of the students reported that they had engaged in IP in a clinical setting; this did not differ by program, but traditional students were more likely to report participating in IPE ($p = .010$).

Table 1: Demographic Characteristics

Characteristic	Traditional ($n = 240$)	Accelerated ($n = 114$)	p
Gender			.002
Female	222 (92%)	93 (82%)	
Male	18 (8%)	21 (18%)	
Age			
Mean ± *SD*	22.2 ± 3.2	28.9 ± 7.3	<.001
Race/ethnicity			0.001[a]
African American	3 (1%)	13 (12%)	
Asian/Pacific Islander	11 (5%)	3 (3%)	
Caucasian	211 (88%)	88 (78%)	
Hispanic	12 (5%)	7 (6%)	
Other	3 (1%)	2 (2%)	
Highest degree			<.001
None	190 (79%)	0 (0%)	
Bachelor's	50 (21%)	101 (89%)	
Master's	0 (0%)	13 (11%)	
Participated in IPE			.010
No	121 (51%)	72 (65%)	
Yes	118 (49%)	38 (35%)	
Engage in IP in clinic			.185
No	187 (78%)	80 (71%)	
Yes	53 (22%)	32 (29%)	

Note. IPE = interprofessional education; IP = interprofessional practice.
[a]Exact test.

Regarding narrative entries on the demographic questionnaire, three observations were noteworthy. First, some traditional students who reported currently holding an academic degree entered comments suggesting that they considered their anticipated BSN degree to be an earned degree, although it had not yet been conferred. Second, in response to the item asking students to describe their experience with IPE, several described working with other health care professionals in a clinical setting rather than working with other health professions students.

Thirty-three respondents reported having current or past experience in the health care field. Of these, 20 identified experience as a certified nursing assistant, nursing assistant/aide, technician, or PCA, which likely refers to the role of patient care assistant or associate. Six respondents had participated in an internship or externship, and five were emergency medical technicians. One respondent reported experience in medical assisting, and one had worked as a mental health worker. Although the questionnaire asked about IP in a clinical setting prior to starting the nursing program, it did not specifically ask about whether or not the respondent had received IPE at an employment site. It is possible that these respondents may have participated in IPE at their workplaces.

The internal consistency reliability of the SEIEL scale was excellent, with Cronbach's alpha of .94 for the interaction subscale, .93 for the interprofessional team evaluation and feedback subscale, and .96 for the entire scale. The mean scores of the two subscales and total self-efficacy score by program are shown in Table 2. The average score on the interprofessional interaction subscale was slightly higher in accelerated compared to traditional programs, but the difference was not significant ($p = .24$). However, the accelerated students averaged significantly higher on the interprofessional team evaluation and feedback subscale ($p = .006$) and on overall self-efficacy ($p = .041$). The standardized effect size d of 0.23 indicates that the difference in overall self-efficacy was of a small magnitude (Cohen, 1988) and the standardized difference in interprofessional team evaluation and feedback ($d = 0.32$) was small to medium.

Since the two programs significantly differed on almost all of the demographic variables, Pearson correlations were used to find which of these variables may contribute to the program differences in self-efficacy. Table 3 shows the correlations between each of the demographic variables and subscale and total scale scores. All the correlations were small; there was only one significant weak correlation, between highest degree obtained and the interprofessional team evaluation and feedback subscale score ($r = .12$, $p = .03$).

DISCUSSION

Compared to the traditional students, accelerated students in this sample had a greater degree of self-efficacy for interprofessional experiential learning overall and for behaviors associated with interprofessional team evaluation and feedback. There were other differences between the groups. Accelerated students were significantly older; there were more African Americans in the cohort; and, not surprisingly, a higher number of accelerated students had obtained a college degree. However, the correlations between demographics and self-efficacy suggest that the differences between traditional and accelerated students with respect to self-efficacy are

Table 2: Means ± *SD*s of Scale Scores by Program

Scale Score	Traditional	Accelerated	Cohen's *d*	*p*
Interaction	65.4 ± 9.1	66.7 ± 10.9	0.13	.242
Team evaluation feedback	59.8 ± 10.5	63.3 ± 11.6	0.32	.006
Self-efficacy	125.2 ± 18.6	129.8 ± 22.1	0.23	.041

due to factors other than gender, age, race, and participating in interprofessional learning or practice. Some of the narrative entries on the demographic questionnaire suggested that there were misinterpretations of items related to highest degree earned, past participation in IPE, and past engagement in IP. Most notably, there appeared to be confusion regarding the terms *interprofessional education* and *interprofessional practice.*

The accelerated students in this sample experienced a higher degree of self-efficacy overall for interprofessional experiential learning than did their counterparts in traditional programs. In the context of Bandura's (1977) theory, the traditional students may be more likely than their accelerated peers to refrain from participating in experiential IPE because of the belief that these activities lie beyond the scope of their ability. This consideration would be especially important for nurse faculty in educational settings that offer interprofessional experiential learning on a volunteer or extracurricular basis, rather than as a requirement. Students with relatively strong perceived self-efficacy may be more likely to participate in optional interprofessional learning experiences. Since the level of perceived self-efficacy can also influence one's coping efforts and perseverance, it is possible that accelerated students may feel more able to cope with challenging interprofessional experiential learning, whereas traditional students may benefit from receiving additional encouragement and support from faculty.

Another noteworthy result is accelerated students' significantly higher mean score on the interprofessional team evaluation and feedback subscale. This finding suggests that the accelerated students may be more likely to engage in behaviors such as giving feedback to the team and individual members, understanding and explaining interprofessional learning and the role of the team, and evaluating the team's performance (Mann et al., 2012). Providing support and opportunities for practice may help increase traditional students' perceived self-efficacy in this domain.

This study had limitations. Convenience sampling precludes generalization of the findings beyond the sample. Another limitation was the variation in data collectors. The researcher collected data at three sites, and a faculty member from the fourth site collected data at that institution. Both were operating from the same instructions; however, it is possible that some responses were affected by the difference in data collectors.

In addition, it appears that some of the questions on the demographic questionnaire were unclear to respondents. Consequently, the ability to draw conclusions regarding the variables of highest degree earned, past participation in IPE, and past engagement in IP, as measured by the demographic questionnaire in this study, is limited. Lastly, the SEIEL scale was developed to measure self-efficacy for interprofessional experiential learning among students who participated in a specific IPE program (Mann et al., 2012). Utilization of this instrument to assess self-efficacy for interprofessional experiential learning among students with varied or no interprofessional learning experience may diminish the ability to draw conclusions based on the findings.

CONCLUSION

Previous research has examined the effects of various interprofessional learning strategies. The results of this study extend existing knowledge by revealing a difference between traditional and accelerated nursing students surveyed in terms of perceived self-efficacy for interprofessional experiential learning. Given the importance of preparing RNs who are ready to engage in IP following graduation, nurse faculty should consider the findings of this study when planning interprofessional learning experiences. Awareness of possible differences between traditional and accelerated students' levels of perceived

Table 3: Correlations (*r*) of Demographic Characteristics with Self-Efficacy

Characteristic	Interaction	Evaluation and Feedback	Self-Efficacy
Gender	–.03	–.10	–.07
Age	–.01	.07	.03
Race/ethnicity	.08	.09	.09
Highest degree	.04	.12*	.08
Participated in IPE	.04	.06	.06
Engage in IP in clinic	.05	.07	.06

Note. Eta correlation ratio was used for race. IPE = interprofessional education; IP = interprofessional practice.
*$p < .05$.

self-efficacy may help faculty to develop IPE experiences that will maximize learning for students in each cohort.

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