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Student Experiences of High-stakes Testing for Progression in One Undergraduate Nursing Program

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Abstract:

Each year, thousands of students throughout the world are required to complete one or more high-stakes tests as a measure of competency in undergraduate nursing education. Currently, the trend in nursing education is to use high-stakes tests to establish program progression policies. However, use of these tests to block student progression is of serious concern. This article describes findings of a pilot study that used a phenomenographic approach to understand senior nursing students' experiences of completing multiple high-stakes tests for successful progression within one undergraduate nursing program. Eighteen graduating senior nursing students participated in the study via individual interviews. Students described a multitude of experiences, organized into five main categories of descriptions: high-stakes tests as a value; high-stakes tests as a stressor; high-stakes tests as a high expectation; high-stakes tests as various inconsistencies; and high-stakes tests affecting the transfer of learning. Student perspectives with high-stakes testing contributed valuable insight lacking in the current nursing education literature. Findings suggested if high-stakes tests are to be used for program progression, it is imperative for nurse educators to convene and explore strategies to support student preparation and success with testing, and develop well-defined structures of teaching and learning for the delivery of course content.

Keywords: high-stakes testing, phenomenography, undergraduate nursing education, student experiences **DOI:** 10.1515/ijnes-2017-0001

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Introduction

Many undergraduate nursing programs around the world rely on various forms of high-stakes testing to evaluate learning and competency of students. The intent is to ensure students are prepared to provide safe and quality care in a highly complex 21st-century healthcare system (Frontiero & Glynn, 2012). High-stakes testing in nursing education refers to specific assessments used as a primary source for nursing faculty and programs to make critical decisions for student progression and graduation (Anema & McCoy, 2014; NLN, 2012; Spurlock, 2012/2013; Sullivan, 2014). Types of high-stakes testing used throughout undergraduate nursing curriculums in the U. S. and abroad include commercially prepared standardized tests (Emory, 2017; National League for Nursing, 2012; Sullivan, 2014), clinical skills evaluations in nursing skills and simulation labs (Bensfield, Olech & Horsley, 2012; Jones, Ziegler, Baughman, & Payne, 2015; Kardong-Edgren, Adamson, & Fitzgerald, 2010), and pass or fail medication calculations tests (Gonzales, 2012; Roykenes, Smith, & Larsen, 2014). The National League for Nursing (NLN, 2010/2012) reported the use of high-stakes test in association with progression policies to be a growing trend among nursing programs; however, Sullivan (2014) argued the "concept" of these tests lack sufficient research in nursing education (p. 72).

Based on the current trend of using high-stakes tests in association with progression policies, the use of these tests to block a nursing student's progression, graduation, and ultimately licensure examination is of serious concern and borders on the edge of "unethical educational practice" (Giddens, 2009, p. 123). Nursing students are primary stakeholders in the nursing education process and the persons required to complete high-stakes tests to progress in nursing programs. However, there is a gap in the nursing education literature related to the student's perspective and experiences completing high-stakes tests. By understanding the nursing student experiences, this knowledge can assist faculty and administrators in developing just and fair examination policies in undergraduate education practices. Therefore, the purpose of this study was to explore the different ways in which nursing students experience completing one or more high-stakes tests for course and program progression in one prelicensure BSN program.

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Background

An array of literature supports high-stakes testing as useful for identifying student and program strengths and weaknesses (Davis, Grinnell & Niemer, 2013; Schroeder, 2013), effective preparation for RN licensure examination (NLN, 2012), and as a predictor of licensure exam success (Harding, 2010; Hyland, 2012). Conversely, Spurlock (2013) argued there is no scientific evidence to support implementing progression policies using highstakes testing improves program quality or licensure exam success. Regardless, the use of high-stakes testing to establish progression policies remains a source of contention in the literature (Giddens, 2009; NLN, 2010/2012; Shultz, 2010; Spurlock, 2013; Sullivan, 2014). According to the NLN (2012), one out of every three undergraduate nursing programs requires successful completion of a high-stakes test for progression. Countries such as Finland (Sulosaari, Hupli, Puukka, Torniainen, & Leino-Kilpi, 2015), Norway (Alteren & Nerdal, 2015; Roykenes et al., 2014), Turkey (Gunes, Baran & Yilmaz, 2016), Australia (Coyne, Needham & Rands, 2013), and Botswana (Tshiamo, Kgositau, Ntsayagae, & Sabone, 2015), to name a few, require nursing students to successfully complete one or more medication calculations assessment prior to progression and/or graduation from nursing programs. The actual number of medication calculation assessments may vary by country. Successful completion of a clinical skills proficiency evaluations, whether in the U.S. or abroad, may also be required for progression in nursing curricula. Unsuccessful completion of high-stakes tests blocks the student's promotion to the next level or graduation from the nursing program, ultimately denying their eligibility to take the licensure examination to become a registered nurse (NLN, 2010/2012; Spurlock, 2013; Sullivan, 2014). This includes students who complete course and program learning objectives, yet are held from progression or graduation for not achieving a specific benchmark or assessment scores on a particular high-stakes test (Spurlock, 2013; Sullivan, 2014). High-stakes tests are being exclusively used to make decisions (Hurst, 2012), rather than the consideration of overall student performance and perseverance. The literature supports multiple sources of evidence (e.g. course exams, projects, and clinical performance) are necessary to evaluate overall student competence and learning within nursing programs (Benner, Sutphen, Leonard, & Day, 2010; Billings & Halstead, 2012; NLN, 2010/2012; Spurlock, 2013).

When high-stakes tests link with progression policies, negative consequences, including interference with meaningful student learning, higher attrition rates, cheating, and litigation have occurred (Beggs, Shields & Goodin, 2011; Bensfield et al., 2012; Davis et al., 2013; Garcia & Woo, 2011; NLN, 2012; Kaplan, 2013). In spite of the known negative consequences of high-stakes testing, there is a dearth of published research exploring the nursing students' experience or perspective of completing high-stakes tests for successful progression in an undergraduate nursing program. Only one published study (Roykenes et al., 2014) and one dissertation study (Tagher & Robinson, 2014) have explored student experiences and perceptions of high-stakes testing and progression. Roykenes et al. (2014) mixed method study (survey and focus group interview) explored freshman nursing students' perceptions of text anxiety with a high-stakes medication calculations test, which was required for progression from two BSN programs in Norway. Students in that study reported moderate to high levels test anxiety, including physical and psychological symptoms due to fear of failure. Tagher and Robinson (2014) also used a mixed-method approach (survey and interview) to explore senior nursing students' perceptions of stress with a commercially prepared exit exam at one U.S. nursing program. Students were required to pass the exit exam with a certain score set by the nursing program to graduate. Students reported both physical and psychological stressors with exit testing related to academic load and time for study, as well as fear of failing and not progressing to graduation. However, both studies were limited to only one form of high-stakes testing, while some nursing programs require students to complete more than one form of high-stakes tests, including clinical skills proficiency evaluations, medication calculations tests, and commercially prepared standardized tests to progress.

Methods

Research design

The following research question guided the study "What are the different ways senior prelicensure nursing students describe their experiences preparing for and completing multiple forms of high-stakes tests to progress within one undergraduate BSN program?". Therefore, a qualitative descriptive design using a phenomenographic approach framed the study. Phenomenography focuses on the different ways individuals perceive, understand, or experience a specific phenomenon (Marton, 1981). The collection of various experiences is represented by categories of descriptions (Akerlind, McKenzie & Lupton, 2014; Bowden & Walsh, 2000; Marton, 1981; Yates, Partridge & Bruce, 2012). The relationship among and between individuals in a group, their different experiences, and the phenomenon is formed and portrayed as a table, image, or diagram in what is termed as outcome space (Bowden and Green 2005; Yates et al. 2012). Outcomes of phenomenography research may be instrumental in improving educational practices, not only from the lens of the student, but also the educator (Bowden & Walsh, 2000).

Saturation is not a criterion for phenomenographical research because the aim is to capture diversity. However, participation requires a range of 10 to 30 participants to ensure sufficient variation of a shared phenomenon (Stenfors-Hayes, Hult & Dahlgren, 2013) with no more than 20 participants for reasonable variation and data management (Marton & Booth, 1997; Trigwell, 2000). Appreciating the variation of nursing student's experiences may help inform nursing education of what students truly believe to be their reality of completing multiple high-stakes tests throughout a nursing program.

Sample and setting

This study was conducted at a mid-level comprehensive public university in the southeast United States following approval from the university's Institutional Review Board (IRB). A convenience sample of senior nursing students was recruited via an invitation letter distributed by a faculty member from one of three courses taken by students in their final semester of the BSN program. The researcher was not the one of the students' faculty the final semester. The invitation described the purpose of the study, confidentiality, voluntary withdrawal, informed consent procedures, and the researcher's contact information. Eighteen graduating seniors agreed to participate in the study, including 17 women and one man. Ages ranged between 21 and 41+ years. The majority of study participants were single students in the 18 to 24 age group representing Caucasian, African American, and Hispanic/Latino ethnicities (see Table 1). Throughout the nursing program, students' complete multiple high-stakes tests to progress to the next semester and ultimately graduate. These tests include three Assessment Technologies Institute (ATI) content mastery exams (Fundamentals, Pharmacology, and Medical-Surgical) and the ATI RN Comprehensive Predictor exam, as well as four medication calculations exams using both faculty and ATI prepared questions. ATI is a U.S. based education company offering online learning modules, practice assessments, remediation, and standardized testing options to improve student mastery of nursing program content and concepts in preparation for RN licensure examination (ATI, 2016). ATI is just one company among other U. S. and international businesses offering educational services to nursing and other allied health programs and students.

| Demographic | Student participants n (%) | |
|---|----------------------------|--|
| Gender | | |
| Female | 17 (94 %) | |
| Male | 1 (6 %) | |
| Age | | |
| 18–24 | 11 (61 %) | |
| 25–31 | 2 (11 %) | |
| 32–38 | 1 (5.5%) | |
| 39–44 | 1 (5.5%) | |
| 45+ | 3 (17 %) | |
| Ethnicity | | |
| Caucasian | 13 (72 %) | |
| African American | 3 (17%) | |
| Hispanic/Latino | 2 (11 %) | |
| Other | 0 (0 %) | |
| Previous Degree/Career | 8 (44 %) | |
| Current GPA | | |
| 2.5–3.0 (minimum of 2.5 required to pass) | 0 (0 %) | |
| 3.1–3.5 | 7 (39%) | |
| 3.6-4.0 | 11 (61 %) | |
| Marital Status | | |
| Married | 5 (28 %) | |
| Single | 13 (72%) | |
| Children | | |
| No | 13 (72%) | |
| Yes | 5 (28%) | |
| Currently Employed | | |
| No | 9 (50 %) | |
| | | |

Table 1: Research sample demographics.

| Yes | 9 (50 %) | |
|---|-----------|--|
| Repeated a nursing program course due to a high-stakes test outcome | | |
| No | 16 (89 %) | |
| Yes | 2 (11 %) | |

Data collection and analysis

Informed consent and selection of a pseudonym was obtained from the participating students prior to the study. Data were collected from students through face-to-face individual semi-structured audio-recorded interviews using five pre-determined questions. These questions were developed based on the purposes of this study and the phenomenographical research process. The interviews started with one open-ended question followed by four semi-structured questions (see Table 2). Probing questions, such as "tell me more about", "give me an example of", and "what did you mean by" were also necessary to help clarify and confirm student experiences of the phenomenon (Bowden & Walsh, 2000). The shortest interview was nine minutes and the longest was 44 minutes. Interviews were transcribed verbatim on Word documents by a paid third-party experienced transcriptionist.

Table 2: Research study student interview questions.

1. Tell me about your experiences completing various forms of high-stakes tests throughout the undergraduate nursing program?

2. What are your perceptions of these high-stakes as a measurement of progression in the nursing program?

3. What do high-stakes tests mean to you as a nursing student?

4. What did you learn about yourself before, during, and after the experiences of completing various forms of high-stakes tests?

5. As a nursing student, tell me your recommendations for nursing faculty and programs using high-stakes in nursing curricula.

Interview transcripts were printed with three-inch margins for research notations and uploaded to AT-LAS.ti, version 7, to manage the data more efficiently. ATLAS.ti is a qualitative data analysis software package, which organizes and sorts participant data for coding and clustering, and storage, as well as integrates researcher memos within the data (ATLAS.ti, 2013; Marshall & Rossman, 2011). The software also has the capability to connect multimedia data materials (ATLAS.ti, 2013) with participant data. Computer data were password protected and written and audio data were kept locked in the researcher's office desk.

Data analysis for phenomenography research requires a specific procedure that involves ongoing examination that differentiates and organizes the various experiences emerging from the data (Bowden & Walsh; Stenfors-Hayes et al., 2013). The process of data analysis for this study followed Dahlgren and Fallsberg (1991) phenomenographical seven-step process of familiarization, condensation, comparison, grouping, articulation, labeling, and contrasting of data. Each step is defined and the process used for this study is illustrated in Table 3. While the steps are distinctly separate, they commonly overlap with one another (Dahlgren & Fallsberg, 1991; Stenfors-Hayes et al., 2013).

Table 3: Phenomenography data analysis process.

| Seven Steps of Analysis (Dahlgren & Fallsberg, 1991) | Procedure for Study |
|--|--|
| 1) Familiarization: reading through the interview transcripts to become fa- miliar with the contents and to ensure no omissions or errors were made in transcription. | Transcripts read twice while listening to audio recordings. Student descriptions of experiences related to the research question were identified. Descriptions were coded from student statements and paragraph sections discovered in the transcript data. Insights and reflection were handwritten in the margins of the corresponding paper transcript pages. 534 student statements containing 162 coded descriptions related to the phenomenon initially emerged from the data. A faculty member with expertise in qualitative research and data analysis reviewed the data transcripts and coded descriptions for credibility, dependability, and confirmability. All transcripts and initial coded descriptions were uploaded to ATLAS.ti software for data management. |
| 1 | Autnenticated tmcclenn@westga.edu author's copy Download Date 2/10/18 11:04 PM |

| 2) Condensation: selecting and fur- | Each transcript was read a third time in ATLAS.ti. |
|---|--|
| ther examining statements from the | - New statements and coded descriptions were highlighted in ATLAS.ti. |
| dialogue that are significant to the phe- | - Coded descriptions sorted, compared, and organized by similarities and |
| nomena under study. | differences using the code manager, memo, and analysis features in |
| · | ATLAS.ti. |
| | – Collective meanings expressed by the group of students were identified. |
| | – Coded descriptions condensed to 23 various descriptions. |
| 2) Comparison: comparing statements | – Additional comparison of coded descriptions reviewed in ATLAS.ti. |
| for similarities and differences | – Similarities and differences of coded descriptions identified and exported |
| for similarities and differences. | to a Word table spreadsheet using the code manager export feature in |
| | ATLAS.ti. |
| | Each coded description contained between two and 141 statements. |
| | – Statements re-examined for proper placement in coded descriptions. |
| 4) Grouping: assigning statements that | - Similar condensed and compared coded descriptions grouped together in |
| express similarities of understanding | preliminary categories on a separate Word table spreadsheet. |
| the phenomenon to preliminary cate- | – Seven preliminary categories of description containing between one and |
| gories of descriptions. | three subcategories identified from the coded descriptions. Although |
| | similar descriptions are condensed to form a main category, subcategories |
| | were also formed to articulate the variation of student descriptions within |
| | the main category. |
| 5) Articulation: capturing the mean- | - Preliminary categories with identified sub-categories identified from the |
| ing of each category where variation | data and reviewed by the faculty member with expertise in qualitative |
| between and within each category is | research were written on two large white boards in a classroom to illustrate |
| taken into account. | data (helpful to view the "big picture" of the various descriptions |
| | experienced by the group of students as a whole). |
| | – Additional collaboration with expert faculty member enabled further |
| | condensing of data into five final categories of descriptions. |
| | – Final categories contained between two and three sub-categories. |
| 6) Labeling: naming the categories | - Read transcripts a fourth time to validate connection between the student's |
| based on characteristics that distin- | coded descriptions and the categories of descriptions. |
| guish each category. Steps 3-6 are re- | - A fifth and final read done to validate student's coded descriptions related |
| peated to validate similarities and dif- | to sub-categories within each category. |
| ferences among the categories. | - The five categories of description depicting collective meanings of student |
| | descriptions named: value, stress, high demands/expectations, |
| | inconsistency, and transfer of learning. |
| 7) Contrasting: describing the meaning | - Categories of description defined based on similarities and differences as |
| of each category in relation to similari- | an effort to identify a |
| ties and differences (results). | relationship between the categories. |
| | Named categories include identified sub-categories. |
| | Structure of relationship illustrated as an outcome space. |

Trustworthiness

Trustworthiness was evaluated based on Lincoln and Guba's (1985) model for establishing credibility, dependability, confirmability, transferability, and authenticity. The model is a reliable method for establishing trustworthiness for phenomenographic studies (Reed, Ingerman & Berglund, 2009). The components of Lincoln and Guba's model to establish rigor of the study is described below.

Credibility

Individual interviews with participants lasted up to 44 minutes. Adequate time or prolonged engagement with each participant as they describe their experiences is one of the best ways to establish credibility (Lincoln & Guba, 1985; Streubert & Carpenter, 2011). Although there was one short interview of nine minutes, the experiences expressed by the student could not be ignored, as phenomenography emphasizes what is learned from individual realities within a group represent a collective consciousness about phenomena under study (Marton, 1981; Marton & Booth, 1997). Credibility in phenomenographic studies can also be ensured with rigorous data analysis of the interview transcripts (Dahlgren & Fallsberg, 1991; Marton & Booth, 1997), which was done for this study. In addition, clarification of data for member checks during the interview sessions ensured credibility of the information (Lincoln & Guba, 1985) and using each student's own language (Bowden & Walsh, 2000).

Dependability

Data from the students' audio and written transcriptions, journal notes, coding patterns from data analysis software, and generated categories from the data analysis served as the audit trail to establish dependability.

Confirmability

Data that established dependability are also components needed for confirmability. Clarification of data during the interview sessions also ensured confirmability.

Transferability

Detailed descriptions of student experiences found in the results section of this study establishes transferability. The reader can then judge the applicability of findings for themselves in relation other settings and populations (Lincoln & Guba, 1985; Polit & Beck, 2012). It is the hope that findings from the various student experiences will influence the gap in the nursing literature, as well as demonstrate relevance in other higher education disciplines.

Authenticity

The students' experiences described within each category represent aspects of the phenomenon experienced in the student's own words to ensure authenticity of the data. In phenomenography, these fundamental aspects of the phenomenon preserve the meanings expressed from the language of each student to maintain quality and ensure authenticity of the data (Bowden & Walsh, 2000).

Results

Student reflections of high-stakes tests

Five primary categories of descriptions emerged from the data: high-stakes tests as a value; high-stakes test as a stressor; high-stakes tests as a high expectation/demand; high-stakes tests as various inconsistencies; and high-stakes tests as affecting the transfer of learning (see Figure 1). Interestingly, several of the student's described experiences could identify with more than one category of description, indicating a relationship among categories. Therefore, the outcome space is illustrated in the form of a relationship diagram (see Figure 2). Quotations within each of the categories described signify student descriptions about their experiences of the phenomenon.



Figure 1: Categories of descriptions with sub-categories of student experiences.



Figure 2: Outcome space representing the categories with the phenomenon.

Category 1: high-stakes tests as a value

Student accounts focused on three sub-categories of values, including caring, testing, and learning. This category contains the majority of coded student descriptions discovered in the transcript data.

Value of caring

Students characterized caring as a positive attribute within the category of values. Student reflections that were constant in this sub-category include caring for self, caring for others, and the desire for faculty understanding of student stress related to high-stakes testing and progression. Caring for others was valued the most in relation to collegial bonds formed with classmates and the care of patients. Particularly, the idea of losing a classmate in the nursing program due to failure of a high-stakes test was upsetting to students as illustrated by following student statement:

(Breeze). People that I may not be the closest friends with or whatever, I hate to see us lose someone from our cohort because it's almost like losing a part of your family...we've been together a long time now and seeing somebody fail out or having to drop down to the part-time program is the worst thing ever. You're like No! We're supposed to finish together!

Caring for self was also seen as an essential value in relation to preparation for high-stakes tests and overall well-being. The following student statement illustrated this point:

(Haven). Caring for self is very important...I made sure that when I got tired, even if did have a test the next day, I'm like forget this. I'm tired. I'm going to bed. If I deprive myself of sleep, I'm not going to be any good tomorrow.

Value of high-stakes testing

Student reflections in this sub-category centered around two different descriptions. One was the value of testing to help in NCLEX [National Council Licensure Examination for U. S. nursing program graduates] preparation; the second was the concern that test performance was over emphasized for progression. Students viewed the value of using high-stakes tests as a way to prepare for licensure examination, as illustrated in the following student statement:

(Amanda). The ATIs really do kind of help you study and prepare yourself for the very high stakes test which we have, which is NCLEX. So I see the benefit in studying the way I studied for ATI and using that to study for NCEX, and by having it as a high stakes thing, you ensure that students are putting in

effort to pass the test or meet the criteria, versus it not being high stakes and then them willing to take a thirty on the test and still proceed.

However, students believed the nursing program considers high-stakes tests more valid measurements of learning competency since outcomes of high-stakes testing affect progression. As a result, students spent more time studying for high-stakes tests than other course assessments and assignments. The following comment illustrates this sentiment:

(Nadia). I felt like it focused a lot because it determined if you were going to go to the next level of nursing school, so it kind of made you feel like that was nursing school, even though of course we had other courses, but I felt like they were manageable to study, but once we had an ATI in a course coming up I feel like all the other classes got put on the back burner. So in a way, I would say that our main focus is ATI because we know that it means so much to this nursing school.

Value of learning

Students characterized learning as a positive attribute within the category of values. Specific student reflections in this sub-category focused on commitment, good study habits, and most importantly, self-confidence as key factors to success on high-stakes tests. Students' value of commitment to the learning process was evident by various accounts of perseverance, the desire to contribute to society, taking responsibility for learning, and maintaining a student/life balance. The following comment illustrated this sentiment:

(Ann). It's been nice to see that hard work does pay off when it comes to – you know, you're taking this however many question test. The hard work that comes up to preparing for a really anxiety-producing moment can result in a good report. Like, a good passing report. Evaluating myself in that way has been – Besides pharmacology it's been I guess confidence producing...It's also been an affirmation kind of – of okay, you are learning, and you are doing what's expected of you.

Category 2: high-stakes tests as a stressor

Stress was the most consistently described experience throughout the data. The stress category comprised three sub-categories of student descriptions, including physiological and psychosocial manifestations, coping strategies, and reflections of the unforeseen rigors of nursing education.

Manifestations of stress

This sub-category reflected student accounts of the various physiological and psychosocial manifestations of stress, which often produced conflict on the part of the student during the interviews. Although sometimes occurring simultaneously with physiological symptoms, psychosocial manifestations appeared to be more dominant in the student reflections. The following student statements are a couple of examples reflective of each type of manifestation:

Physiological. (Suzanne). There was points where I would literally have to stop and breathe because I felt like my chest was tightening. I would shake. I would sweat. I would get so anxious that I couldn't – the screen would be blurry.

Psychosocial. (Laura). Just because it's, you know, if you don't pass, you don't move forward. There's no, I mean, it's just I look at everything that I put into this program and the money I put into it, the time, the effort and to know that everything can come down to one test.

Coping strategies

In response to the physiological and psychosocial manifestations of stress and high-stakes testing, students described various positive and negative coping strategies they employed. Positive examples included physical activity, positive self-talk, rest and sleep, deep breathing relaxation techniques, and adequate preparation for tests. Interestingly, adequate preparation for testing as a healthy coping strategy stems from the values category, where students emphasized good study habits as a value of learning. However, some students relied on

medication, poor dietary choices, and alcohol as an alternative coping skill with stressors in preparation for high stakes tests, which is a significant concern. One student (Bob) stated, "some people have to take drugs. Seriously. There were several students in my cohort that literally had to go to the doctor and be prescribed something for that anxiety to use just when they were taking their exams."

Program rigor

Students also described the unforeseen challenges and rigors necessary to be successful in undergraduate nursing education, especially with high-stakes tests as illustrated by the following comment:

(Laura). No one said it [nursing school] was easy. It's just I think I went into it kind of blinded. I didn't know. It's nothing like what I expected. I don't know necessarily what I expected, but it was not what I expected, but more so with the high stakes tests.

Category 3: high-stakes tests as a high expectation

Added workload and delaying of progression were two sub-categories described in student reflections consistent with high expectations of high-stakes testing. Each sub-category is described below with student accounts of their experiences.

Added load

Student accounts in this sub-category described high-stakes tests as an added load to an existing semester's rigorous academic load. For example, one student (Antonio) stated, "there's just always a class that's, like, kind of tough and then you've got to worry about your ATI." The following student statement further reiterates this sentiment:

(Patsy). It's really hard when we have other classes. It's a full load. We have other classes that we can't forget about. Like, every class is important, and there's a lot of time we have to put forth for clinical. Not just going to clinical, but doing all our clinical paperwork was just... It was really difficult; you know?

Delay of progression

Students described experiences of the risks to progression based on the outcomes of high-stakes tests. One student (Margarita) stated, "don't use the word high-stakes. It's just a reminder that if I don't pass this class, I may not graduate from nursing school." Another student (Marie) further reiterated this emotion "you could have a good grade in a course with an ATI test and then fail that test and still end up failing the course, even though technically you earned an A." Although students expressed value in high-stakes tests on learning, as described earlier in category one, they did not feel these tests should serve as the primary source to evaluate overall course learning outcomes as illustrated by the following student comment:

(Haven). I think that we should have high stakes tests, but I don't think they should be pass or fail. I don't think that if I fail an ATI test, that I should fail the course, but I do think that it should be worth part of the grade. It should be a significant part of the grade, so there's still a chance of passing the class, but it would have a very high impact.

Category 4: high-stakes tests as various inconsistencies

Students described various inconsistencies related to high-stakes tests, including test structure versus real-life application, faculty guidance with ATI study resources and remediation plans, faculty expectations for students, medication calculations instruction, standardized practice tests versus proctored tests, overall course success with ATI failure, and ATI content with a concept-based curriculum. For instance, one student (Sue) stated, "with Med-Surg [ATI content mastery], you have to have had all of Med-Surg and since we aren't using that type of curriculum that makes that very hard." Additionally, students expressed disconnect between the

ATI content and course resources. Students adamantly expressed that if the ATI test package were going to determine progression to the next level, then the nursing program should integrate the content into all courses. The following statement reflected this sentiment:

(Kate). If we're gonna take the ATI test I would want it to be taught the ATI way because sometimes our books or what we're taught in class may be different than what ATI tells us to do and if we're gonna pass ATI we have to do what ATI tells us to do.

Category 5: high-stakes tests as affecting the transfer of learning

Student reflections of their experiences describe high-stakes tests as either positively or negatively affecting their ability to transfer learning from one setting to another. This category contained two sub-categories of student descriptions, including the application of learning and impairment of learning.

Application of learning

Even though students admitted to struggling with numerous aspects surrounding high-stakes tests, they did acknowledge that preparing for and completing the various high-stakes tests as a direct application of knowledge learned for future nursing practice, as illustrated in the following statement:

(Ann). The feelings you get about getting so anxious about performing for something that weights so much on all your hard work. How much that's been concerning over the past two years, but how it's also been an affirmation kind of – of okay, you are learning, and you are doing what's expected of you to not only pass but hopefully be proficient one day. So it's been a love-hate relationship of – you don't like it while you're doing it, but you see that it's actually helpful...I've always been like I don't like ATI. I don't like those med calcs. I missed one little decimal point. But, then I see that I'm going to have to get that right one day because, you know.

Impairment of learning

In contrast, students also described accounts of the negative impact of high-stakes tests on learning in the nursing program, as illustrated by the following statement:

(Suzanne). The stress and everything that ATI puts on us, because all of them are pass or fail, I feel that ultimately, honestly it kind of hinders our learning a little bit because we're so focused on I need to know this! I need to know this now! And we're kind of just remembering instead of actually learning, and so I feel like that's kind of where it hinders us a bit.

Discussion

Findings described the experiences of senior nursing students preparing for and completing multiple highstakes testing to progress in one undergraduate program. The literature supports the use of high-stakes tests to evaluate both strengths and weaknesses of nursing students and nursing programs. Although there is little research from the student's perspective to support this claim, student reflections from this study did indicate positive and negative aspects associated with high-stakes tests. The aim of this study was not to generalize student experiences with high-stakes tests for progression, but rather to understand what high-stakes tests meant for students.

High-stakes tests as a value

Overall, students were supportive of using high-stakes tests as a valuable learning tool, not to determine course and/or program progression. Of significant concern were student descriptions that the nursing program values high-stakes testing as better measurements of knowledge and competency than course unit exams, classroom

activities, and other forms of assessments. This finding is consistent with Kaplan's (2013) premise that highstakes tests may only measure the student's ability to test, rather than knowledge learned; thus, weeding out good students who are poor test takers.

Student accounts of the value of caring and support from classmates and faculty were also viewed as necessary ingredients for success on high-stakes tests. This finding is consistent with McEnroe-Petitte (2011) assertion that faculty support demonstrates caring and promotes nursing student success. Implications of this finding suggest that exploration of innovative strategies to enhance faculty and peer support of nursing students may be necessary for the undergraduate program.

High-stakes tests as a stressor

Students in undergraduate nursing programs experience more stress than any other undergraduate college major (Goff, 2011). Stress was the most prominent findings experienced by students in this study. Stressors related to the rigors of nursing education, including high-stakes testing, among undergraduate students have been reported to inhibit cognitive functioning (Palmer, 2013), impede meaningful learning (Goff, 2011), interfere with clinical performance (Chernomas & Shapiro, 2012), and lead to high-risk behaviors, including substance abuse and poor dietary practices (Goff, 2011). Findings from this study were congrument with the literature.

Students in this study reported both unhealthy and healthy strategies in coping with the stresses of highstakes tests. The manner in which a student copes with stress can affect his or her wellbeing and success in the program. Although healthy adaptation can motivate and drive ambition, unhealthy adaptation can lead to depression and emotional distress; therefore, healthy strategies are necessary to reduce the impact (Melrose, 2011). Based on findings from this study, it is essential for nursing faculty to emphasize various resources available to students both on and off campus. In addition, it is imperative for faculty to encourage self-care and healthy behaviors as students strive to balance the academic demands of the nursing program with personal and social agendas.

High-stakes tests as a high expectation

Overall, students appeared to struggle with balancing program course requirements and preparation for highstakes tests, suggesting teaching of time management skills early in a nursing program is essential. Findings related to high expectations also suggest faculty should collaborate to review exam schedules, assignments, and other projects to determine if the overall workload is indeed appropriate and realistic for students. Students in this study also described experiences related to the high-stakes status of tests and the effect those tests have on progression in the nursing program.

The negative stigma of the term "high-stakes" and the fact that one or more tests each semester could block progression suggests students view the landscape surrounding high-stakes tests as an obstacle, which may impede student success. In effect, student reflections were consistent with the nursing literature, which recommends multiple forms of assessments to evaluate student knowledge and competency (Benner et al., 2010; Billings & Halstead, 2012; NLN, 2010/2012; Spurlock, 2013).

High-stakes tests as various inconsistencies

Students described various inconsistencies related to their experiences of high-stakes testing in the nursing program. Specifically, students voiced concerns about the amount of course textbook information and ATI content not taught within the program's concept-based curriculum. Based on student statements related to inconsistencies, several implications for nursing education emerged.

First, students were adamant about integrating ATI content into various courses, since the nursing program requires successful completion of numerous ATI tests for progression and graduation. Secondly, students suggested that faculty reorient students each semester to available ATI study and testing resources, especially in those courses where high-stakes testing take place. Lastly, students suggested a formal faculty-led remediation plan or remediation course. Students conveyed that a formal remediation plan with faculty was more likely to assure student understanding of weak content areas, rather than the current direction by faculty to complete an independent, focused review on weak content areas. It appears that clear and well-defined structures associated with content instruction, available resources, and formal remediation strategies in courses with high-stakes tests be considered and implemented consistently by nursing faculty across the curriculum.

High-stakes tests as affecting the transfer of learning

The most interesting finding related to transfer of learning is that students reported that high-stakes tests could both increase and decrease their ability to learn. For instance, students described high-stakes tests as helping in the preparation for the licensure exam and professional practice, as well as face future challenges in practice. However, students also described high-stakes tests as impairing their learning based on increased academic load, inconsistencies with curriculum resources and test structure, and the stress testing has on program progression and graduation. Therefore, exploration into strategies that enhance the positive aspects of learning with high-stakes testing should be emphasized and negative aspects minimized. For instance, recommendations provided by Benner et al. (2010), Heroff (2009), the NLN National League for Nursing (2012) and Spurlock (2013) related to support services for students, development of more structured teaching and learning strategies, and continued evaluation and modification of progression and testing policies can be integrated to promote student success and maintain program consistency in nursing curricula.

Limitations

The main limitation was that the study was conducted at one university setting using a convenience sample of senior nursing students in their last semester of nursing school. Nonetheless, these findings may be representative of student experiences in other undergraduate nursing programs. Students in this study may also have felt an obligation to participate because the researcher was one of their instructors the semester prior to the study. However, all students in the final semester of the nursing program had the opportunity to participate.

Conclusion

The purpose of the study was to explore experiences of students completing multiple forms of high-stakes tests for course and program progression at one undergraduate BSN program. High-stakes testing used in undergraduate nursing education, whether as a course/program progression measure or not, can be useful tools to evaluate student knowledge and competency and program effectiveness (Hyland, 2012; NLN, 2012). Students in this study were supportive of high-stakes testing as a useful learning tool. However, students stated that their experiences with stress, inconsistencies, and high expectations impaired their learning. Furthermore, students were adamant that high-stakes tests should not be used as the sole measure for course outcomes and program progression.

Student descriptions of their experiences with high-stakes testing contribute new insight into the phenomenon, research, and the science of nursing education. Awareness of student experiences with high-stakes testing with course and program progression has relevance to curriculum structure in not only undergraduate nursing programs, but also other professional health science and discipline-specific programs in higher education. The research findings suggest that it is critical for nurse educators to convene and explore strategies that enhance support for student success, as faculty have an ethical obligation to prepare students for high-stakes testing. Additionally, nurse educators should provide a well-defined structure of teaching and learning and eliminate inconsistencies in course delivery.

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