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Evaluating Retention Strategies for At-Risk Undergraduate Nursing Students

Joanna L. Ramsden-Meier
Walden University

Walden University

COLLEGE OF EDUCATION

This is to certify that the doctoral study by

Joanna Ramsden-Meier

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Review Committee
Dr. Wendy Edson, Committee Chairperson, Education Faculty
Dr. Marianne Borja, Committee Member, Education Faculty
Dr. Amy Hanson, University Reviewer, Education Faculty

Chief Academic Officer

Eric Riedel, Ph.D.

Walden University
2015

Abstract

Evaluating Retention Strategies for At-Risk Undergraduate Nursing Students

by

Joanna Ramsden-Meier

MBA, Upper Iowa University, 2001

BA, University of Northern Iowa, 1996

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

May 2015

Abstract

As there continues to be a nursing shortage and a lack of diversity in the nursing profession, it is important to retain at-risk students who have been admitted to nursing programs. The purpose of this program evaluation was to compare at-risk students who had not received retention services to at-risk students who had received retention services at a Midwestern college. A formative evaluation was conducted using information from three sources: the college, the students, and the community. Guided by a constructivist theory defined by Ponticell, this study examined the effectiveness of the retention program in terms of its impact on course completion rates, semester, and cumulative GPAs, and number of students on probation and dismissed from the college. Using a retrospective quasi-experimental design, data from 72 students in 2 groups were compared using chi-square, t tests, and one-way repeated-measures ANOVA. Although the results were not significant, students who received retention services were less frequently on probation and dismissed, had higher course completion rates, and had higher GPAs. In addition, 54 graduating students were surveyed, and their perceptions of the retention services were positive, with an overall mean score of 4.02 out of 5.0. Themes identified through a community key informant interview included student/personal responsibility, family responsibility, and community responsibility. The program evaluation was summarized in an evaluation report that included the results and recommendations for continuation or the addition of retention services. This study may impact social change as the retention services are reviewed and adjusted in order to produce an increased number of qualified, diverse registered nurses.

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Dedication

      This work is dedicated to my grandparents, Bob and Joan Nohre. While they began this journey with me, they will help me celebrate this accomplishment from a place greater than I can even imagine. Thanks to my husband, Kevin, who is and always will be the calm to my storm. And to the rest of my family, including my coworkers, thank you for your part in my doctoral journey through words of encouragement, tolerance, understanding, and helpfulness as this "paper" took the front seat. My heart is filled with gratitude.

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Section 1: The Problem

Introduction

The Nursing Workforce Diversity Scholars (NWD Scholars) retention programs were created in 2011, funded by a grant. Participating students were selected based on specific criteria as defined by the grant. During the last 2 years, NWD Scholars have received funding in the form of scholarships and stipends (Nursing Workforce Development Guidelines, 2010). In order for the students to keep scholarships and stipends, students must attend specific retention programs. These programs include meeting with a financial aid counselor, meeting with an academic mentor, and attending seminars that focus on academic enrichment (Nursing Workforce Development Guidelines, 2010). Prior to the NWD grant, at-risk students were not identified, and there were limited services available to them aiding their progression through the nursing program. In this project study, I evaluated the retention programs that have been implemented since the grant monies were received, allowing the college administration to determine if the services are effective and what changes need to be made.

This project study was done to evaluate the retention services provided at a Midwestern college to students defined as *at-risk*. A formative evaluation was used to collect data from three sources: the college, the students, and the community. The Midwestern college received a grant in 2011 to provide retention services for students who are educationally or economically disadvantaged. The results of the formative evaluation will assist in informing the grant administrators during the final year of funding by the grant and as the college continues the services without grant funding.

Historically, the college did not admit minority students at the same rate as nonminority students (Nursing Workforce Development Guidelines, 2010). From 2007 through 2009, minority students were admitted at a rate of 23-29% of those who applied, compared to a rate of 53-70% for nonminority students (Nursing Workforce Development Guidelines, 2010). While minority students were underrepresented in the admissions of the college, retention, graduation, and NCLEX-RN pass-rates for minority students were typically higher than nonminority rates (Nursing Workforce Development Guidelines, 2010). However, at-risk students are not exclusively minority students. The definition of *at-risk student* encompasses more than racial or ethnic diversity.

Definition of the Problem

At this small college of nursing and health sciences in the Midwest, creating a diverse student body is part of the institutional mission. In order for the college to become more diversified, grant funding was sought in order to develop retention programs that would assist nursing students who come with disadvantages that may put them at risk. The Nursing Workforce Diversity Scholars (NWD Scholars) retention programs were created in 2011 and funded by a grant. Once grant funding had been secured and students had been admitted and funded through grant dollars, an evaluation of the program was needed to determine whether the services introduced were having an effect on the identified at-risk students.

This project study took place at a Midwestern college in the United States. This institution is categorized by the Carnegie Foundation for the Advancement of Teaching as a special focus institution and is a private, not-for-profit institution (Carnegie, n.d.).

Offering degrees in nursing and health sciences, the college's Bachelor of Science in Nursing (BSN) program enrolls the most students. In Spring 2013, the college enrollment was 610 students, of which 358 were BSN students (Ramsden-Meier, 2013). While the college's first year retention rate is high at 94%, the attrition rate for the BSN program has ranged from 6–10% over the last 6 years (Ramsden-Meier, Hanson, & Kramer, 2012). Of those students who left the college in 2011-2012, 44% left for academic reasons (Ramsden-Meier et al., 2012). While some students do not return to the college to pursue a BSN degree, others petition the school for readmission.

This institution is a private, not-for-profit institution that grew from a hospital-based nursing diploma program. While separately incorporated, the college has significant ties to the hospital. General education courses are not offered at this institution, so students must complete pre-requisite courses at another accredited institution prior to enrollment. The students who are accepted and who enroll here are highly qualified and have the ability to be successful in the curriculum and on NCLEX-RN. Transfer students admitted to the nursing program in Fall 2012 had an average high school GPA of 3.44 and a composite ACT average of 22.20 (Ramsden-Meier, 2012). From 2009 to 2012, the college's first-time NCLEX-RN pass rates ranged from 88.88% to 97.85% (Iowa Board of Nursing, 2013).   The national first-time pass rate for 2009–2011 ranged between 87.42 and 88.80%, and the Iowa first-time pass rate for 2009–2011 ranged between 82.99% and 85.30% (Iowa Board of Nursing, 2011a). In addition, from 2008–2011, this college obtained the second highest NCLEX-RN pass rates among baccalaureate programs testing more than one student in the state of Iowa for 3 of the 4

years (Iowa Board of Nursing, 2011b). Students who are not successful in a class or semester or who are dismissed academically may have other intervening variables preventing them from being successful. It is important for the students to have an opportunity to resolve barriers that may prevent them from being successful in their nursing courses (Goff, 2011).

While the retention strategies are immediate resources that are designed to assist students in their present course(s), they are also solidifying information that will be useful as the student prepares for NCLEX-RN. Retention services had not been evaluated officially by the Midwestern College since they were first offered. While comments were welcomed from students, faculty, or staff, a formal evaluation had not been conducted. Conducting an evaluation of the students' perceptions of the retention services that were offered and how the retention services aided in the students' success was likely to assist in making recommendations for changes or enhancements to services for future students. For this research study, I requested perceptions of retention services from the students who had received them.

In an attempt to evaluate the different types of remediation programs that are available, Pennington and Spurlock (2010) conducted an evaluation of eight remediation programs to determine their effectiveness in improving NCLEX-RN outcomes. Of the eight remediation programs evaluated, all of them reported using more than one remediation tactic, which included interventions such as teaching study skills and stress management, taking practice NCLEX-RN exams, and involving faculty advisors in the development of personalized plans of action (Pennington & Spurlock, 2010). This study

lends evidence that creating remediation programs may benefit students' further academic ability and provide assistance that is needed to be successful on NCLEX-RN.

According to Darussalam (2010), all programs need to be evaluated, and in education, it is the evaluation that determines whether a program is effective or ineffective. An evaluation should focus on four aspects of the program: the view of the participants, the learning that takes place, the behavior of participants, and the results of evaluation (Darussalam, 2010). This information is useful to plan the next stages of the program. Kalra, Nelson, Dave, and Wadhwa (2011) expressed agreement concerning the value of program evaluation: "To determine the effectiveness of any teaching program, it is essential to get feedback from participants and analyze it to further improve the teaching curriculum" (p. 506). It is important to ensure that the program is doing what it is supposed to do. Time and other resources are wasted if programs are not getting the intended outcomes.

<div align="center">**Rationale**</div>

Evidence of the Problem at the Local Level

Since the addition of retention services directly related to assisting at-risk students at the Midwestern college, a thorough review and evaluation of the services had not been done. Taking inventory of what services are provided and reviewing the success of students who took advantage of the services may allow the local institution to move forward with what is working and make adjustments to what is not. Analyzing the remediation activities, such as time management, study skills, emotional health, nursing

course GPA, cumulative GPA, and being successful in each course is a concept that has not yet been a strategy used with at-risk students.

The definition of *at-risk students* at the Midwestern college is two-fold. Students may be classified at-risk for either economic or education reasons. *Economically disadvantaged students* are identified as coming from a family with an annual income that does not exceed 200% of the U.S. Census Bureau's adjusted annual income (Nursing Workforce Development Guidelines, 2010). *Educationally disadvantaged students* are identified as coming from a high school with a lower ACT/SAT average than the state test results, coming from a high school where 50% or fewer graduates attend college, having a diagnosed physical or mental impairment that limits participation in educational experiences, being a person for whom English is not the primary language and language is a barrier for academic performance, being a person who is a first-generation college student, and/or being a person who comes from a high school where at least 30% of enrolled students were eligible for free or reduced-price lunch (Nursing Workforce Development Guidelines, 2010).

Based on the college's admissions policies, students are well prepared for success in the nursing program; however, other nonacademic factors may get in the way of their academic success, therefore putting them at risk. This college's undergraduate nursing programs are full. This impacts the institution's retention rate and revenue. It is important to identify at-risk students and determine what resources are needed in order to help them succeed. The evaluation of the resources provided by retention services is meant to assist at-risk students, and it is necessary to ensure that these services are

impacting the at-risk students. Students who are not successful at this Midwestern college also impact the community's ability to fill open nursing positions in the area. This college is important to the community.

Currently, the local institution classifies prelicensure nursing students who do not obtain a semester grade point average (GPA) of 2.5 or above as on probation. (Students who fail to obtain a semester GPA of 2.5 or above in any subsequent semester are academically dismissed. Academic dismissal may also occur if the student fails to meet program requirements in three or more required courses, or fails to successfully repeat a nursing course. Automatic dismissal occurs when a student's cumulative GPA is below 2.0 at any time.

Due to the importance of passing NCLEX-RN on the first attempt to students and colleges, identification of at-risk students is crucial. Identifying students early in their college careers as at-risk students is important, but it is also important to continuously monitor students who are not initially identified as at-risk due to potential additional at-risk behaviors. At-risk behaviors can include failing an exam, missing an excessive number of classes, failing a course, experiencing a semester on probation, or being readmitted to the nursing program after a dismissal (Goff, 2011). The current definition of an at-risk student includes a student who is economically or educationally disadvantaged and does not currently take into account additional at-risk behaviors. The current retention services need to be evaluated to determine whether at-risk students receiving retention services are more successful when compared to a group of at-risk

students who were not previously identified as at-risk and who received no retention services.

Some types of retention strategies implemented in institutions nationwide have been described as *high-stakes testing*. High-stakes testing is defined by Heubert and Hauser in Spurlock (2006) as an exam given to students where the results will be used to make decisions regarding tracking, promoting, or graduating students. Nursing faculty are under pressure to graduate only students who are likely to pass NCLEX-RN; therefore, high-stakes testing retention strategies have been implemented in colleges and universities to determine which students are likely to pass NCLEX-RN (Shultz, 2010). These strategies include increasingly difficult admission requirements, progression policies, and additional testing products to validate the faculty's assessment of the student's ability to pass and progress to future nursing courses (Shultz, 2010).

Many nursing programs have implemented some type of prepackaged NCLEX-RN preparatory exam(s) as part of the nursing program (Shultz, 2010). The Midwestern college uses ATI's Comprehensive Assessment and Review Program (CARP) as a NCLEX-RN preparatory package that begins preparing students to take NCLEX-RN in their second semester of nursing. Nursing faculty find themselves under a great deal of pressure to graduate only those likely to pass NCLEX-RN (Shultz, 2010). This includes using the high-stakes testing strategies as well as increasing admission requirements (Shultz, 2010).

Since 2000, retention strategies have been implemented; however, until 2009, the strategies only addressed NCLEX-RN pass rates directly by requiring students to

remediate during their final semester if NCLEX-RN predictor test scores were not at the required level.   Since the grant was implemented in 2011, retention services have expanded to include offerings that assist students who are struggling with progression in the nursing curriculum. Ultimately, passing NCLEX-RN is the goal for all stakeholders: students, their family members, faculty, and staff. As the college purposefully aimed at a more diverse population of students, retention efforts followed in order to give all students the resources needed to be successful in the nursing program.

One retention strategy includes the use of Assessment Technologies Institute® (ATI®) testing throughout the nursing program. ATI's CARP tool allows students to take NCLEX-RN-like exams during the nursing program. The students take a proctored exam in most nursing courses that accounts for 3% of their grade. Feedback reports are provided to students through their ATI account. These reports provide information regarding areas of improvement to the student. Students are able to take subsequent nonproctored exams where they receive immediate feedback regarding the answer(s) selected.

Additional retention strategies are available through the retention office. In 2009, a retention coordinator was added to the student services staff. The retention office offers weekly seminars that include topics such as APA formatting, time management, test-taking strategies, and study skills, test anxiety, reading texts, and taking notes. Tips of the day are posted in the student services online course, which provides students with one-sentence advice about how to be a more effective student. During the last year, the retention office has added Tutor.com® and StudentLingo® as online help offerings.

Tutor.com allows students to submit writing samples for evaluation at any time and offers assistance in writing and grammar. StudentLingo offers modules that assist students in study habits. StudentLingo has four categories of online workshops: academic and career exploration, learning to learn, personal management, and reading and writing samples (StudentLingo, n.d.).

The local institution can provide evidence of the retention strategies that are currently in place, including admission and progression criteria, as well as services provided from the retention coordinator. In addition, the student services office student database can provide the data necessary to determine at-risk students, passed course percentages, GPA, students on probation status, or students who have been dismissed.

Another source of evidence may be institutions similar to the local institution as identified by American Health Science Education Consortium (AHSEC). AHSEC is a group of institutions of higher education that are hospital based. The purpose of AHSEC is "to advance and support quality hospital and healthcare system related health sciences education in the United States" (AHSEC, 2013, para. 1). This group of institutions is a resource to gather policies and procedures on admission criteria, progression criteria, definitions of at-risk students, and retention strategies.

Grant funding typically requires reporting of how funding was spent. At this juncture in the grant calendar, it is necessary to collect data to determine the value of the retention services that have been implemented since receipt of the grant. It is important to determine whether the services that were expected to retain at-risk students are retaining at-risk students. It is also important to understand whether the at-risk students

find the services of value and whether the members of the community that is served by the Midwestern college think that the college is adequately supporting students in degree completion. A program evaluation may offer data that can determine whether at-risk students are assisted by the retention services offered on campus.

Evidence of the Problem From the Professional Literature

A program evaluation involves, quite simply, determining whether a program is doing what its designers said it was going to do. If positive results were not achieved, why were they not achieved? In contrast, if positive results were achieved, why were they achieved (Young, Denny, & Donnelly, 2012)? Since receipt of the grant, evaluation to determine whether change is occurring in at-risk students based on the additional retention services in place had not been conducted. As described by Frye and Hemmer (2012), collecting data to determine whether a program is successful must be deliberate and methodical. The data selected for collection must be able to connect to a success indicator. The inability to retain a student in college is a lose-lose situation. The student loses time, money, and self-esteem. The college loses revenue and may develop a reputation for poor persistence rates if too many students withdraw (Cameron, Roxburgh, Taylor, & Lauder, 2011). The shortage of nurses in the United States creates an urgency that relates to the successful program completion of registered nurses. While the shortage of nurses varies from state to state, this college's contribution to address factors that may produce additional Bachelor of Science-prepared nurses for the workforce may have an impact on health care (Cameron et al., 2011). In addition, diverse nurses are not equally represented in the nursing workforce. According to a fact sheet published by the

American Association of Colleges of Nursing (American Association of Colleges of

Nursing, 2013), in 2012, 37% of the U.S. population were ethnic and racial minorities

while only 16.8% of the registered nurses were ethnic and racial minorities. Mulholland,

Anionwu, Atkins, Tappern, and Franks (2008) reviewed past student records to determine

whether diversity played a role in the attrition rate of nursing programs. This study

determined that ethnicity was one of the factors with a relationship to a higher rate of

attrition. In addition, retaining nursing students aligns with increasing the number of

nursing graduates. Graduates of nursing programs can create social change by filling

nursing vacancies in hospitals and clinics to alleviate the shortage.

The purpose of this program evaluation is to determine the strengths and

opportunities of the retention program developed as a result of the NWD Scholars grant.

In order to determine where there are strengths and opportunities, I compared at-risk

students who had received retention services with at-risk students who had not received

retention services by evaluating course completion rates, semester and cumulative GPAs,

and number of students on probation and dismissed from the college. This comparison

will assist in making data-driven decisions regarding how to proceed with retention

services for at-risk students. In addition, a survey was offered to students who had

received retention services in order to obtain their perceptions of the services that are

offered. A key informant was interviewed to determine one perspective of a community

member with regard to the local college's efforts of educating nursing students in the

community.

Definitions

At-risk students: At-risk students are students who have met the Midwestern college's criteria of economically disadvantaged or educationally disadvantaged. At-risk students were the population used in this study (Nursing Workforce Development Guidelines, 2010).

Attrition: Attrition refers to a student who stops making progress toward a degree for any reason. Reasons for attrition typically include a student who withdraws from a college or university, either voluntarily or through dismissal (Nursing Workforce Development Guidelines, 2010).

Course completion rate: The course completion rate was calculated by dividing the number of completed credit hours by the number of attempted credit hours (Austin Community College District, n.d.).

Cumulative GPA (grade point average): The cumulative grade point average is calculated by dividing the total grade points by the total graded hours (Coastal Carolina University, n.d.). In this study, the cumulative GPA was calculated to reflect all courses taken during the student's enrollment in a nursing program.

Dismissal: Dismissal indicates that a student is no longer able to enroll in the Midwestern college because the student is not making satisfactory progression in the nursing program. The Midwestern college dismisses students for the following reasons: (a) failure to obtain a 2.5 semester GPA for two semesters, (b) failure to meet program requirements in three required courses, (c) failure to successfully repeat a nursing course, or (d) a cumulative GPA of below 2.0 at any time.

Economically disadvantaged: An economically disadvantaged student is identified as coming from a family with an annual income that does not exceed 200% of the U.S. Census Bureau's adjusted annual income (Nursing Workforce Development Guidelines, 2010).

Educationally disadvantaged: Educationally disadvantaged students are identified as coming from a high school with a lower ACT/SAT average than the state test results, coming from a high school where 50% or fewer graduates attend college, having a diagnosed physical or mental impairment that limits participation in educational experiences, being a person for whom English is not the primary language and language is a barrier for academic performance, being a person who is a first-generation college student, and/or coming from a high school where at least 30% of enrolled students were eligible for free or reduced-price lunch (Nursing Workforce Development Guidelines, 2010).

Nursing Workforce Diversity: A project at the Midwestern college that is designed to increase the number of individuals from educationally and/or economically disadvantaged backgrounds as well as other populations, such as racial and ethnic minorities who are underrepresented in the population of registered nurses (Nursing Workforce Development Guidelines, 2010).

Persistence: Persistence indicates that a student is making progress toward a degree or has completed a degree (Tinto & Cullen, 1973).

Probation: A student is considered on probation if the student does not obtain a semester GPA of 2.5 or above.

Retention services: Retention services are services that have been developed to assist students who are at risk. Services include the development of life skills such as time management, controlling anxiety, interview skills, and preparation to enter the workforce. In addition, academic-skill services include services related to writing, reading texts, taking lecture notes, study techniques, test anxiety, and test-taking techniques (Nursing Workforce Development Guidelines, 2010).

Semester GPA (grade point average): The semester grade point average is calculated by dividing the semester's grade points by the semester's graded hours (Coastal Carolina University, n.d.).

Significance

Colleges and universities admit students with the goal of producing quality graduates. Admissions requirements are the first step toward producing quality graduates. Once students have been admitted, progression policies are put into place to further identify students who may be at risk of not becoming quality graduates. The impact of a student who is unable to progress is negative for both the student and the institution. Identifying at-risk students early in their careers may give them an opportunity to be connected with services that will lessen or even eliminate at-risk behaviors or their consequences.

Retention services are put in place to help students be successful. Evaluating services is one method by which to determine whether students engaging in retention services are successful. In order to establish whether retention services are valuable to students, it must first be determined whether students are taking advantage of the services

offered (Gill, Mac an Bhaird, & Fhloinn, (2010). Participation information should be

shared with college stakeholders as well as students. It is important for students on

campus to know the level of participation in retention services by their peers (Gill et al.,

2010).

Once participation levels are determined, further evaluation is needed to

determine whether the services have an impact on the students' grades, GPAs, and

retention (Gill et al., 2010). The desired outcome of this project study was to develop

retention services that meet the challenges experienced by at-risk students in order for the

students to graduate and pass NCLEX-RN.

In an attempt to evaluate the different types of remediation programs that are

available, Pennington and Spurlock (2010) conducted an evaluation of eight remediation

programs to determine their effectiveness in improving NCLEX-RN outcomes. Of the

eight remediation programs evaluated, all of them reported using more than one

remediation tactic, including interventions such as teaching study skills and stress

management, taking practice NCLEX-RN exams, and involving faculty advisors in the

development of personalized plans of action (Pennington & Spurlock, 2010). This study

lends evidence that creating remediation programs may benefit students' further

academic ability and provide assistance that is needed to be successful on NCLEX-RN.

Guiding/Research Question

After the review of literature and the objectives of the NWD grant relating to

retention, the guiding question was whether the retention programs that had been

implemented since the grant monies were received were effective and whether changes needed to be made to the current retention services.

When this study began, retention services had been implemented at the local institution but had not yet been evaluated. In addition, the success of the retention services implemented had not been reviewed to determine whether the implementation of these services had made an impact on the success of at-risk students on this campus.

In order to determine whether retention services are beneficial to at-risk students, several research questions were developed.

Research Question 1: Do at-risk students who received retention services have a significantly higher percentage of passed courses than at-risk students who did not receive retention services?

$H1_a$: There is a significant difference in the percentage of passed courses between at-risk students who received retention services and at-risk students who did not receive retention services.

$H1_0$: There is no difference in the percentage of passed courses between at-risk students who received retention services and at-risk students who did not receive retention services.

Research Question 2: Did identified at-risk students who received retention services have a significantly higher semester and cumulative GPA than at-risk students who did not receive retention services?

$H2_a$: There is a significant difference in semester and cumulative GPAs between at-risk students who received retention services and at-risk students who did not receive retention services.

$H2_0$: There is no difference in semester and cumulative GPA between at-risk students who received retention services and at-risk students who did not receive retention services.

Research Question 3: Were there significantly fewer identified at-risk students who received retention services on probation compared to identified at-risk students who did not receive retention services?

$H3_a$: There is a significant difference in the instance of probation between at-risk students who received retention services and at-risk students who did not receive retention services.

$H3_0$: There is no difference in probation status between at-risk students who received retention services and at-risk students who did not receive retention services.

Research Question 4: Were identified at-risk students who received retention services dismissed significantly less often than at-risk students who did not receive retention services?

$H4_a$: There is a significant difference in the instance of dismissal between at-risk students who received retention services and at-risk students who did not receive retention services.

$H4_0$: There is no difference in dismissals between at-risk students who received retention services and at-risk students who did not receive retention services.

Research Question 5: How did students rate their retention services on the Survey of Student Perception of Support Services, Persistence, and Belongingness?

Research Question 6: What perceptions were offered by the key informant regarding how the Midwestern college supports students toward degree completion?

Review of the Literature

In order to obtain information related to this program study, several literature searches were conducted. Databases used to conduct the literature review included ERIC, MEDLINE, CINAHL, Nursing & Allied Health Source, Health and Medical Complete, PubMed, Academic Search Complete, PsycARTICLES, and PsycINFO. Terms used in the search for literature focused on *program evaluation, retention*, and *at-risk students*. This study used a constructivist theoretical approach. A *constructivist approach* was defined by Ponticell (2006) as learners using existing and new knowledge to shape their perceptions. There are five key skills used by learners, including awareness of their abilities to learn and memory capabilities (Ponticell, 2006). In addition, learners evaluated whether they were able to accomplish a learning task, understand which learning strategies work best for them, use those strategies, and then evaluate whether the strategy was successful (Ponticell, 2006). The final skill was knowing which strategy to use in which situation (Ponticell, 2006). As students are able to make the connection between past or current academic success and future academic success and NCLEX-RN success, they will increase their awareness of their own knowledge base and how to use it to increase their future successes.

The constructivist approach has been used in other studies. Lyons (2008) used a constructivist approach to determine how critical thinking was impacted when using problem-based learning to teach a NCLEX-RN review course to associate degree nursing students. There is additional research that suggests that learning is progressive and that learning one concept is crucial to learning the next concept (Krajcik, 2011). The constructivist approach is also apparent in most nursing curricula, as they are linear in nature. Students often cannot progress to the next semester without successful completion of the current coursework. Constructively learning the current semester content is required for progression, as the future semester content will build on the concepts already learned.

Although the concept of constructivist theory can be understood, actually applying this theory to individuals and their experiences with learning takes practice. Constructivist theory defines the need for individuals to understand their learning processes in order to successfully use learning techniques to gain further knowledge. This is important for nursing students because the nursing curriculum starts with basic information about the human body and then builds with more complex information as the curriculum progresses. The ability for students to learn different learning strategies by putting them into practice and then evaluating them to determine which strategies are the most effective for them is beneficial for progression within the curriculum. Students who were exposed to retention services were given the opportunity to be exposed to different learning strategies and to evaluate them and use them in future courses. Students who did not have access to retention services did not have the same opportunity for exposure to

possible learning strategies and therefore could not evaluate which strategy might work the best for their progression.

Since the grant was initiated, there had not been an evaluation of the retention services that are offered for at-risk students. The outcomes of the grant include creating a learning environment by offering academic enrichment activities and social support, improving the retention rate of at-risk students, and improving the graduation rate of at-risk students (Nursing Workforce Development Guidelines, 2010). If the current services offered to improve retention are not showing the desired results, then additional research needs to occur to determine how to meet the needs of at-risk students. Kalra et al. (2011) suggested that the evaluation of any teaching program requires analyzing the participants in order to make improvements. To determine whether retention rates of at-risk students were improving, an evaluation of those services was needed. According to Berk and Rossi (1999), there are six steps to designing and testing new programs: identification of issues, formulating policy responses, designing a program, improving the program, assessment of the program, and determinations of cost effectiveness. Not all steps may be relevant to every evaluation. For this study's purpose, Step 4, improving the program, was where the evaluation began, as Steps 1 through 3 had already been completed. In improving the program, it was necessary first to determine what needed to be enhanced. However, understanding whether a program is effective may be difficult because there are other, nonprogram factors that are going on in the students' lives that may also be the reason for the impact (Berk & Rossi, 1999).

Program evaluations are valuable tools when information is needed regarding program success or when improvements of a program need to be determined. Program evaluations can be conducted in the middle of a program, as in this research, or at the conclusion of a program. A program evaluation can be defined as understanding the program well enough through information gathering and review to determine what is contributing to the success of the program and any possible improvements (Frye & Hemmer, 2012). Specific measurements are often identified to determine what is considered "success." A primary reason for conducting a program evaluation is accreditation requirements or funding requirements, such as grant funding or other educational groups (Frye & Hemmer, 2012). However, more recently, educators have become more interested in the process of evaluation due to the changing approaches to educate students. In order to learn about the dynamic education system, educators must first understand the new approaches to education, and program evaluations are becoming more common in all aspects of learning (Frye & Hemmer, 2012).

Possibility of Limited Published Studies on Program Evaluations

While program evaluations may be occurring frequently in education, it is possible that very few are published. In a study conducted by Nestel et al. (2012), discussion regarding why program evaluation is often not published was presented. One reason posited by the study is that program evaluations are sometimes not conducted until after program development and are not thought of as research; they are thought of as having value only to the institution. In addition, research articles are often limited to 2,500 words, and program evaluations can often produce a great deal of output, which

makes editing to the word limit difficult (Nestel et al., 2012). The program evaluations

that are described in the following literature review include those specific to the

importance of program evaluation; retention programs; program reviews conducted as a

result of a set of requirements, such as legislative requirements, grant requirements, or

graduate outcomes; the timing of the retention program; and problem-based learning and

retention of employees.

Importance of Program Evaluations

There may be a "feeling" of whether a program is successful or unsuccessful, but

unless there is data to back the "feeling," there is no evidence that a program is producing

expected outcomes. A program evaluation can provide needed evidence, such as what is

making a program successful, what is not working, or opportunities for growth. Grigal,

Dwyre, Emmett, and Emmett (2012) created a tool to evaluate a new initiative that

supported students with intellectual disabilities. Pogrund, Darst, and Boland (2013) used

interviews to review with participants their experiences in a program to assist blind and

visually impaired students in connecting with their peers and learning new skills. Both

program evaluations were conducted to determine whether their programs were doing

what was intended.

The evaluation of a retention program has four categories, according to a study by

Moscoso, Sanduvente Chaves, Portell Vidal, and Argilaga (2013). Included in the

categories were dealing with urgent needs first and rationalizing using some retention

programs for some groups of students but not others. In addition, if a program is no

longer needed or effective, it should be discontinued or replaced. Effectiveness is what is

being evaluated, and decisions need to be made based on whether there is value in the

program (Darussalam, 2010). It is also important to make sure that the data that are

collected are assessing what they are intended to assess. Passy, Morris and Waldman

(2009) conducted a program evaluation that started with making sure the data collected

included useful data that could be used to evaluate the program.

Evaluation of Retention Programs

Some retention strategies are implemented before a student is admitted or through

orientation programs. Other retention efforts begin when a student shows signs of a

challenge. Challenges can include academic factors, such as a low GPA or failure of

course, or nonacademic factors such as challenges adjusting to college, lack of study

skills, or formal and informal socialization (Domina, 2009; Moses et al., 2011).

Sometimes, specific agencies such as accreditors or governmental regulations require

program evaluations, and other times administrators at an institution want to better

understand the transition from student to employee (Haggerty, Holloway, & Wilson,

2013; Igbo et al., 2011; Morris & Hancock, 2013). Regardless of the reason for program

evaluation, conducting such an evaluation can steer a program in a new direction or

indicate that current efforts are successful.

Whether one is attempting to retain students or employees, retaining those

individuals who have already been recruited to a campus or employer is more cost

efficient than recruiting new students or employees (Mulholland et al., 2008). Retention

is an important part of any campus or company. The evaluation of retention programs

can be done in several ways, as in the current study—using archival data, gathering data

on perceptions of those in the program, and using interviews. There are various points in

a student's journey where retention efforts can take place.

Retention Efforts in Preadmission and Admission

Admission criteria are often put in place to ensure success. This is the first step in

retaining students (Domina, 2009). However, many times the admission criteria are

specific to GPA and standardized test scores. While this can help predict future academic

success, nonacademic success may be more difficult to predict. Administrators at

colleges and universities may invest time in reviewing personality or demographic

characteristics to determine whether a student may be at risk in relation to degree

completion. There are programs that review at-risk characteristics in high school.

Domina (2009) investigated high school programs that were developed to increase at-risk

high school students' skills in order to help them succeed in high school and be more

likely to attend college. While the results were not statistically significant, students who

were involved in a retention program at the high school level did improve their

performance in high school and increase their chances of enrolling in a postsecondary

institution (Domina, 2009).

Personality characteristics are sometimes deemed important for determining

success. Moses et al. (2011) reviewed factors indicative of success in engineering

students to determine whether there were also personality indicators in addition to

academic factors that could predict success. Openness was the personality factor that did

have a significant influence on retention. Another study also indicated that important

factors for success included gender, race, degree, and participation in the college's

mentoring program or first-year retention program (Mills et al., 2009). It is not

uncommon for personality characteristics to be used to make admissions decisions.

Orientation programs are often used as an opportunity to have new students on

campus to inform them of policies and processes and to get them accustomed to the

campus and meet fellow students and instructors (Mills et al., 2009). Gilmore and Lyons

(2012) determined that an orientation program increased retention. Attrition rates after a

redesigned orientation program were less than 2%. The program focused on orienting

students to their new environment, resources such as library registration, and other

support services (Mills et al., 2009). After students attend an orientation program, the

college or university may then conduct a program evaluation to determine whether the

orientation program is retaining students. Bliss, Webb, and St. Andre (2012) reported

positive results from the Learning, Achievement, Engagement, and Progress (LEAP)

program based on performance indicators such as first and second semester GPA,

retention, and graduation rates. This first-year experience program results also indicated

that results for women in the LEAP program were significant, while the results for men in

the LEAP program were not significant (Bliss et al., 2012). Different groups of students

may benefit from different retention programs, as indicated in the LEAP program.

A retention program may be conducted over the admission and orientation stages

of a student's educational journey and may continue once the student has completed a

semester. Noonan, Lundy, Smith, and Livingston (2012) reviewed a retention program

that consisted of data collected prearrival, at orientation, and then while in the program.

This model included an academic warning system made up of preadmission data such as

admission GPA, required participation in the orientation program, and then peer tutoring once students were on campus. This retention model was successful and retained a higher percentage of students than did the preretention program (Noonan et al., 2012).

Engagement Programs

Many colleges use engagement of students as a method of retention. Davidson, Metzger, and Lindgren (2011) found that when online students were intentionally engaged in occasional face-to-face meetings and classes, students were able to interact with one another, get support from the faculty, and obtain technology assistance. The graduation rate of this program grew significantly after the introduction of the program (Davidson et al., 2011). Another retention program also used face-to-face retention strategies that included mentorship and technology support and also successfully retained students at a higher rate than previous cohorts of students. This retention program was specifically targeted to underrepresented, disadvantaged, and minority undergraduates (Escallier & Fullerton, 2009).

Peer mentoring or other mentoring is a theme in the literature for retention programs. Robinson and Niemer (2010) evaluated a peer mentor tutor program (PMTP) put in place to retain nursing students in a BSN program. The PMTP groups met weekly to collaborate on course content as well as time management, test-taking skills, study strategies, and how to reduce stress and anxiety (Robinson & Niemer, 2010). Peer support is seen as valuable by students. Mesues (2011) reviewed a program that also used peers in retention. One of the four themes that emerged from this program was strong networking, both formal and information, as a contributor to retaining students

(Mesues, 2011). Miller and Dalton (2011) evaluated a retention program that used mentors from the student's profession to instill leadership and the personal skills of a clinician, the student's desired occupation. The students indicated on a survey that this type of mentoring was beneficial for understanding what would be expected of them as clinicians (Miller & Dalton, 2011).

Other types of socializing have also been used in retention programs. Salazar (2012) reviewed a retention program for postsecondary students who grew up in the foster system and found that participation in extracurricular and college-sponsored social events was an indicator of retention. While the Salazar study focused on nonacademic socialization, other studies have focused on academic socialization. At-risk medical students in South Africa were engaged in additional coursework and lengthened class times for foundational topics in the hope of retaining them at a higher rate (Sikakana, 2010). In addition, writing seminars and opportunities to develop supplementary skills such as study and examination skills were offered to the at-risk students. In a similar study, underrepresented minority students and first-generation college students were given additional assistance in a basic biology course (Harackiewicz et al., 2013). An attempt to focus on positive factors rather than negative factors was purposely instilled in students during the biology course (Harackiewicz et al., 2013). Both retention programs were able to retain students at a higher rate than before the programs were put into place (Harackiewicz et al., 2013; Sikakana, 2010). Finally, nontraditional students can also be retained at a higher rate by engagement (Goncalves & Trunk, 2014). Students in this study indicated that programs that are targeted for nontraditional students may help them

feel a sense of belonging. The engagement of students may require the college to target the specific groups that are most likely to withdraw. Further understanding the reasons why students leave will help to determine what services to offer.

Progression

Some students do not enter colleges and universities as at-risk students. Sometimes during the student's progression through their program of study, something occurs that makes the student at-risk for attrition. Progression policies are one example of retention efforts. Heroff (2009) described a retention program for students enrolled in a BSN program. The retention program included the addition of a progression policy, which indicated specific remediation activities for students who had not yet met program standards. Academic indicators, such as GPA, are often included in progression policies. A meta-analysis was done by Valentine et al. (2011) where most of the 19 studies evaluated used GPA as a success indicator. Sophomore retention programs were one example of retention strategies that occur once the student has taken courses at their current institution. As indicated in a study by Sanchez-Leguelinel (2008), students had a positive view of the retention program on campus, but the results of the retention program did not indicate there was a significant relationship between the student's participation in the program and retention. The retention program needed to be changed to ensure the students were both positive about the program and the program was successful (Sanchez-Leguelinel, 2008). Valentine et al. (2011) also found no significant difference in at-risk students who were in retention programs.

The addition or changing of course content may be done for retention purposes. Focus groups were used in a study by Thomson and Hilton (2011) to obtain student perceptions of a progression-focused retention program. Content was moved in the curriculum in order to present it to students earlier rather than later in a physiotherapy program. In this study, moving the content earlier in the program increased the student's learning and success later in the program (Thomson & Hilton, 2011). In a study conducted by Pourshanazari, Roohbakhsh, Khazaei, and Tajadini (2013) it was content delivery that was altered. Study skills were introduced in a basic level physiology course and the results showed that students who were taught study skills performed better and were retained at a higher rate than those who did not receive study skills during their physiology course (Pourshanazari et al., 2013). Finding a solution to retention as students progress through a program is another type of retention program.

Program Evaluation Based on Requirements (Legislative, Grant, etc.)

It is not uncommon in health care or education for regulations to change or improvements to be made to current practice. As a result, programs change and then evaluations may follow. In this research project, a program evaluation was needed to determine if outcomes of a grant were being met. While the grant outcomes were not being led by a legislative change, they were requirements set forth by the grant and needed to be addressed appropriately. If a program evaluation had not been conducted, providing evidence that the retention program was meeting the outcomes set forth by the grant would be difficult. Program evaluations appear in the literature to address change

in regulations, whether they are dictated by grant requirements, changes from the Department of Education, or another governmental agency.

When new regulations are introduced, sometimes a program evaluation is the best method to determine whether the regulations are met or whether there needs to be improvement. Morris and Hancock (2013) completed a program evaluation when new competencies were established by the Institute of Medicine. The new competencies were required for all health related programs, including nursing programs throughout the United States. Evaluating the competencies was completed to determine what competencies were present in the current curriculum and which competencies needed additional attention (Morris & Hancock, 2013). Igbo et al. (2011) received grant dollars from Health Resources and Services Administration (HRSA) to focus on a retention program for at-risk students. In order to determine if the criteria for the grant and outcomes stipulated by the grant were met, a program evaluation was conducted.

Transition From Student to Employee

Once the student has been retained through graduation as a student, a new retention process begins. Employers want to retain their employees just as colleges and universities want to retain students. Haggerty, Holloway, and Wilson (2013) reviewed a new registered nurse retention program that was in place to help transition new graduates of nursing programs into new nurses. A transition program was evaluated and while the majority of students were satisfied with their experience in the program, there were still some new nurses who were not satisfied (Haggerty, Holloway, & Wilson, 2013). This evaluation found that the program had some very good retention strategies, while there

were other strategies that were not working for some of the new nurses (Haggerty et al., 2013).

Implications

There are many possible outcomes that may occur as a result of this program evaluation. One possibility is that a significant difference between the at-risk students who received retention services and the at-risk students who did not receive retention services, will indicate that the retention services offered are beneficial.

A second possible outcome may be that weaknesses in the retention program are identified. If weaknesses are identified, the program evaluation results can be reviewed at a higher level to determine what has contributed to this weakness. In addition, the program evaluation will help identify areas of opportunity for future at-risk students.

While many institutions, including the Midwestern college, have developed retention services in order to assist students, it is important to evaluate the services to determine whether the correct services are offered to the correct group of students. Since student needs differ, offering a wide array of services may increase the likelihood of having the correct resources for each student. In addition, it is important to hire retention staff that understands how to connect each student to services that will best support their needs.

This evaluation may benefit several individuals and institutions. First, this evaluation may benefit students who need assistance in addressing barriers to success in a nursing program. Weaknesses or gaps in services can be identified in the current services offered, therefore opportunities for improvement may be a benefit gained from a program

evaluation. In addition, colleges of nursing will also benefit from this evaluation as the methodology may be duplicated to review or add services at any institution. Evaluating retention services may help nursing schools increase graduation rates and first-time NCLEX-RN pass rates.

Summary

Identifying at-risk students early in their college career can have an impact on their ability to persist in an academic program. There have been many studies conducted in the past indicating what makes students successful and what factors may impact persistence. In addition, there are many studies that attempt to identify at-risk students prior to failing a course or being on a probationary status. Remediation and retention strategies at colleges and universities have been introduced to students who have been identified as at-risk by the institution. The evaluation of retention services at the local institution was conducted to determine if the services were making a difference in the performance of at-risk students.

This evaluation compared two groups of students who are identified as at-risk by the local institution. One group of at-risk students did not have access to retention services because they attended their first and second semester prior to the availability of retention services that were targeted specifically for at-risk students. The second group of at-risk students was required to participate in prescribed retention services as part of a grant received by the local institution. The two groups of students were compared to determine differences between course completion rates, GPAs, and probations and dismissals.

Section 2: The Methodology

Introduction

Evaluating retention services offered to at-risk nursing students was an attempt to determine whether the retention services were effective. Using a mixed methods design, I collected both quantitative and qualitative data in a formative evaluation using three sources: the college, students, and the community. Retrospective data were collected from the college's database to obtain student GPAs, course completion rates, and receipt of probation or dismissal letters. A survey was given to students who had received retention services in order to collect their perceptions of the retention services and how they assisted them in being successful. Finally, an interview took place with a key informant in the community to obtain perceptions of how the college is able to fill the needs of the community in relation to healthcare.

Research Design and Approach

I conducted a formative program evaluation that included reviewing retrospective data of at-risk students, collecting information from current at-risk students who received retention services regarding their perceptions on the effectiveness of the retention services in promoting their success, and interviewing a key informant regarding the perceptions of the community about the local college. A mixed methods approach was used to combine both quantitative and qualitative data collection in a concurrent strategy. Creswell (2012) described concurrent data collection in mixed methods research as collecting data using the qualitative and quantitative methods simultaneously to better understand the research problem. Since the retrospective data, survey data, and interview

did not rely on one another during data collection, they were collected separately, and did

not impact the results of one another.

Retention services at the local college had not been evaluated since their

inception, and collecting the data listed above provided information regarding the success

and perceptions of the current retention services, addressing all three key stakeholders:

the college, the students, and the community.

A program evaluation was designed to evaluate the retention services offered to

at-risk students. In this program evaluation, a mixed methods design was applied in

collecting both quantitative and qualitative data using a formative evaluation involving

three types of information: college information, student information, and community

information. Frye and Hemmer (2012) described conducting a formative evaluation as

collecting data while a program is taking place and sharing results from the collected data

with the program administrators so that changes can be made during the program. A

formative evaluation was chosen due to the timing of this project with relation to the

grant. As described in Patton (1982), the Evaluation Research Society Standards

Committee identified six types of evaluation that are defined by the type of evaluation

that is conducted as well as the types of activities conducted during the evaluation.

Formative evaluation is one of those six types identified and is further described as

finding methods for further improvement or management of a program (Patton, 1982).

Methods for improvement were determined by offering at-risk students a short survey to

evaluate the current retention services. Results will be communicated to the program

administrators in order to make changes to retention services, if necessary, in a white

paper format. The overall goals of this program evaluation included determining whether

students benefitted from the retention activities prescribed in the grant. Student GPA,

course completion rates, and the instances of probation and dismissal were also

evaluated.

Berk and Rossi (1999) suggested a seven-phase process of evaluation for

programs that are ongoing. Phase 1 includes determining whether the program is

reaching its intended participants (Berk & Rossi, 1999). Next, the evaluation determines

whether the program is being properly administered based on the population served,

followed by insuring that any funding is properly used (Berk & Rossi, 1999). Phase 4

involves evaluating whether the effectiveness of the program can be estimated, and Phase

5 evaluates whether the program was effective. Phase 5 was the primary focus of this

research, as the first 4 phases have been reviewed based on the receipt and requirements

of the grant. Phases 6 and 7 relate to evaluation after the effectiveness of the program has

been evaluated. Specifically, Phase 6 determines whether the program was cost-

effective, and Phase 7 moves the program into a bigger picture and involves asking

whether this program could be valuable for other populations (Berk & Rossi, 1999).

The most compelling justification for using a formative evaluation instead of a

different type of evaluation included the timing of the evaluation. As the evaluation was

conducted while the program was in progress, several types of evaluations were

eliminated. For example, a front-end evaluation takes place prior to the program's

beginning (Patton, 1982). As this program had already begun, this type of evaluation was

not feasible. A second type of evaluation is the evaluability assessment, which involves

evaluating the ability to evaluate the program. This type of evaluation entails

determining whether it is feasible to conduct a more formative evaluation, so was not in

the scope of evaluation that was conducted (Patton, 1982). An impact evaluation is a

summative evaluation that involves evaluating the outcomes of a program at its

conclusion (Patton, 1982). As this program was not at its conclusion, it was not feasible

for this research to be a summative evaluation. A program monitoring evaluation was a

possible method of evaluation that might have been feasible for this study; however, I

sought to categorically check on participants in the program and whether the participants

were in compliance with policy (Patton, 1982). As this research was intended to seek

improvement based on services offered between two groups of participants, the program

monitoring evaluation was not the best match. Finally, an evaluation of the evaluation

was not a feasible program evaluation, as the program had not been evaluated in the past

(Patton, 1982).

Setting and Sample

A convenience sample was used to select the participants for gathering

retrospective data, as the students were already part of their respective groups. This

resulted in a sample size of 72 prelicensure nursing students. The population was

prelicensure nursing students. The sample included only prelicensure students enrolled in

the undergraduate nursing program due to the scope of this study. Fifty-four students had

access to retention services, while 18 students were in their first two semesters of the

prelicensure nursing program prior to the receipt of the nursing grant. Using G Power 3.1

software, the adequate sample size was calculated. Based on a .3 effect size and power at

.90, the sample size should have been 117. The sample size used in this doctoral study was 72, which was not adequate.

Students attending the Midwestern college between Fall 2010 and Spring 2013 were selected by determining whether they met the criteria of an at-risk student and were enrolled in an undergraduate nursing program for at least two semesters. A student may be at risk for economic or educational reasons. Economically disadvantaged students are identified as coming from a family with an annual income that does not exceed 200% of the U.S. Census Bureau's adjusted annual income (Nursing Workforce Development Guidelines, 2010). Educationally disadvantaged students are identified as coming from a high school with a lower ACT/SAT average than the state test results, coming from a high school where 50% or fewer graduates attend college, having a diagnosed physical or mental impairment that limits participation in educational experiences, being a person for whom English is not the primary language and language is a barrier for academic performance, being a person who is a first-generation college student, and/or coming from a high school where at least 30% of enrolled students were eligible for free or reduced-price lunch (Nursing Workforce Development Guidelines, 2010).

Convenience sampling was used by Yucha, Kowalski, and Cross (2009) to divide a population of nursing students into two groups for the purpose of assigning students to two different types of clinical groups. Although Yucha et al. did not use a retrospective data collection method, convenience sampling was used because this group of students was available to participate due to their enrollment in a clinical course. Convenience sampling was used in this research because the students were or had been enrolled in the

nursing program during the semesters that were being evaluated. Random sampling was

not possible due to the retrospective design. Tipton et al. (2008) also used the

convenience sampling method in their retrospective study and divided the groups based

on their past performance. Convenience sampling allowed me to use the existing groups

of students to evaluate the difference between them depending on whether retention

services were available.

In order for students to be eligible for inclusion in this study, they must have been

in attendance for their first two semesters in the nursing program at the local institution

between the Fall 2010 and Spring 2013 semesters. In addition, the students needed to

meet the criteria determined by the grant to be eligible for inclusion in this study. The

group of selected participants was 78% female and 22% male. This gender distribution

differs from that of the local institution's nursing program, which is currently 94.5%

female (Ramsden-Meier, 2012). Students were educationally disadvantaged,

economically disadvantaged as described by the grant, or both. The group of students

who received the retention services was larger than the group of students who did not

receive retention services. There were 54 students in this study who received retention

services and 18 students who did not receive retention services. The population included

six semesters of students, and retention services were offered for four of the six

semesters. Using further past students was considered, but the admission criteria of the

Midwestern college were consistent using this group of students. Only students who had

received retention services had the opportunity to take the survey related to their

perceptions of the retention services offered. Fifty-four students received the survey, and one community member was interviewed.

Permission was granted from the chancellor of the local institution. Because sensitive information, such as family income and grades, was needed from the student database at the institution, all names were removed to ensure anonymity and privacy of the students.   Because these data were collected retrospectively, it was not possible to get permission from students. In a retrospective study by Kruzicevic et al. (2012), data collection was deemed exempt from student permission because the data were archival and could be used for analysis. However, a data use agreement was entered into with the chancellor of the local institution.

Participants in the survey and interview component of the study were given an informed consent form explaining the purpose of the study and informing them that their participation in the study was voluntary.

Data Collection

The overall goals of this program evaluation were to determine whether at-risk students who received retention services had higher GPAs, better course completion rates, and lower instances of receipt of probation and/or dismissal letters than at-risk students who did not receive retention services. Another goal was to determine whether the students perceived that the retention services that are offered were assisting them in succeeding in the nursing program. An additional goal of this program evaluation was to understand how the community perceived the college's engagement in the community with relation to preparing future healthcare providers.

In order to capture data regarding retention services from the three stakeholders—the college, the students, and the community—three types of data were collected. First, secondary data were collected based on students' course completion rates, GPAs, and receipt of probation and/or dismissal letters. These data make up the retrospective aspect of the research design, as the data existed already in the college's database, and I reorganized the data for the purpose of this research. A survey was distributed to students who had received retention services to determine their perceptions of the services and how they viewed them as aiding their success in the nursing program. In addition, the opinions of a community member were recorded to get an informant's view of how the community viewed the local college in relation to filling a need in health care. The results from the three sources were presented to the college administration and the grant administrators for review.

Retrospective Data

A program evaluation from the perspective of the college used a quasi-experimental design using retrospective data. This method was used to evaluate Research Questions 1 through 4, which were related to student GPAs, course completion rates, and receipt of probation or suspension letters. As the at-risk students were grouped as determined by the retention services available, random assignment was not possible (Creswell, 2012). All students were enrolled for at least two semesters in a prelicensure program between Fall 2010 and Spring 2013. The students were followed for two semesters. GPAs were collected before entry into the nursing program and after the first

and second semesters of enrollment. Course completion rates and receipt of probation and/or dismissal letters were collected for both Semester 1 and Semester 2.

The experimental group included at-risk students who enrolled in the prelicensure nursing program after 2011 and received retention services. The control group used was a historical control group composed of at-risk students who enrolled in the prelicensure nursing program prior to 2011 and who did not receive retention services due to the reasons mentioned above. These students did not have access to the retention services because these services did not exist at the time the students were enrolled in the program.

Quasi-experiments are often used in educational settings when the research involves groups that are already intact (Creswell, 2012). The quasi-experiment has been used in other nursing education research. In a study by Yucha et al. (2009), students' stress levels were measured to determine whether clinical assignment within one hospital would decrease their anxiety when compared with students who did clinical rotations at several clinical sites. However, the students were not able to be randomly assigned to groups; this created a threat to the internal validity of the research, as there were selection factors of the two groups that were not controlled (Creswell, 2012). According to Cook and Campbell (1979) quasi-experiments required the researcher to review the potential threats to internal validity and rule them out one by one.

Retrospective studies have also been used in nursing education research. Data collection in retrospective studies can be accomplished using existing databases. Tipton et al. (2008) used the retrospective design to review previous academic performance to make predictions of future academic performance. A retrospective study was also used

by Kruzicevic et al. (2012) to determine predictors of academic success and reasons for attrition in medical students. Retrospective studies have been used to collect past data in order to evaluate whether changes in the educational setting have made an impact. The limitations of a retrospective study are similar to the limitations of quasi-experiments: the inability to randomly assign students to groups in addition to the disadvantage of working with past data, which may be no longer relevant, compared to live data.

Several quasi-experimental designs were used to compare the experimental group with the historical control group. A no-treatment control group design with pretest and posttest was used to compare cumulative GPA before, during, and after entry into the prelicensure nursing program. This type of design was used in order to rule out threats to validity and to strengthen the proposed hypotheses (Cook & Campbell, 1979). As both groups were enrolled in the same courses during their first two semesters in the prelicensure nursing program, the difference between the two groups was that one group received prescribed retention services and the other group did not. The no-treatment control group may have moved in the same direction as the treatment group, but at a different rate (Cook & Campbell, 1979).

A posttest-only design with nonequivalent groups was used to compare course completion rates and receipt of a probation or dismissal letter. The posttest-only design with nonequivalent groups was used because these data were not available prior to entry into the nursing program. Pretest data for course completion rates and receipts of probation or dismissal letters were not available due to the nature of the local institution. As the local institution is an upper division institution and does not offer general

education courses, all students were transferring to the nursing program from various institutions. Comparing course completion rates and instances of probation or dismissal from many different institutions would have been inconsistent due to the various policies regarding course completion requirements and probation and dismissal requirements.

At-risk students are identified during their first semester on campus; therefore measuring the receipt of probation and/or dismissal letters from the nursing program is not feasible in the scope of this proposal. The nonequivalent group of students was identified by using the same at-risk definitions in place once the grant was in place. The researcher used the criteria to identify those students who would qualify as at-risk in the year prior to the addition to retention services. The potential threats to using the posttest only design include the inability to evaluate the student's potential prior to the retention services. While the admission criteria of the college give guidance to the standards the students must meet to enter the prelicensure nursing program, admission criteria do not give a clear picture of the student's abilities prior to receiving the benefits of the retention services.

A retrospective cohort method was used to collect the data from Fall 2010 through Spring 2013. Factual information was collected from the college's database. Factual information is described by Creswell (2012) as data that is obtained from school records that provide information on a population. The first step of data collection included determining which students were considered at-risk based on the definition of at-risk students defined above. Reports were run from the college's database to include the students who met the at-risk criteria. Once the at-risk students were identified, a

spreadsheet was created using the college's database in order to collect data on the variables that were defined in the research questions. An excel spreadsheet was used to record the data that were collected. The data were stored on a password and firewall protected server. Once the data were compiled, any identifying student information was deleted. An example of the spreadsheet is in Appendix G.

All students who met the at-risk criteria were included in the study, including all full-time and part-time students. Students enrolled in the nursing program at this college are enrolled as a cohort, so all students take the same courses throughout the nursing curriculum. All pre-requisite nonnursing courses are completed prior to taking any nursing courses. It is possible that students may take nonnursing elective courses during the semester. Nonnursing elective courses will not be taken into consideration for this research.

The dependent variables that were measured included course completion, semester and cumulative GPAs, and the receipt of a letter of probation or a letter of dismissal. Table 1 identifies the variable, and explains how it was measured and when it was measured.

Table 1

Study Variables for Archival Academic Data

Variable	Type of variable	How is it measured?	When is it measured?
Course completion	ratio	Percentage. Number of courses completed divided by the total number of courses.	At the conclusion of semester one and at the conclusion of semester two.
Admission GPA	ratio	Cumulative GPA upon admission.	Prior to taking courses at Midwestern college.
Semester One GPA	ratio	Semester GPA using only semester one nursing courses.	At the conclusion of semester one.
Semester Two GPA	ratio	Semester GPA using only semester two nursing courses.	At the conclusion of semester two.
Cumulative GPA at conclusion of Semester Two	ratio	Cumulative GPA using semesters one and two nursing courses.	At the conclusion of semester two.
Receipt of letter of probation	nominal	Review of academic file to determine if student was placed on probation during semester one or two.	At the conclusion of semester two.
Dismissal	nominal	Review of academic file to determine if student was dismissed during semester one or two.	At the conclusion of semester two.

A no-treatment control group design with pretest and posttest was used to compare cumulative GPA before, during, and after entry into the nursing program. A posttest-only design with nonequivalent groups was used to determine the number of students from each group that completed each enrolled course, received a probation or dismissal letter, and semester and cumulative GPA. Data collected regarding semester and cumulative GPAs were measured using a ratio scale. An interval scale, or continuous scale, makes the assumption that there are equal distances between each of the intervals (Creswell, 2012). The GPAs collected ranged between 0.0 and 4.0.

Data collected regarding whether a student completed courses in which they were enrolled and data regarding whether a student received a letter of probation or dismissal were measured using a nominal scale. Nominal scales, or categorical scales, are used to provide a category from which to choose the characteristic of the variable (Creswell, 2012). For this study, the percentage of courses completed were tracked and ranged from 0% - 100% and students either received a letter of probation or dismissal or did not receive a letter of probation or dismissal.

The independent variable that was measured was whether or not the at-risk student received retention services. Undergraduate nursing students who met the at-risk criteria and who enrolled during the Fall 2011 or after were invited to participate in the NWD Scholars opportunity. Qualified students were offered a monthly stipend for adhering to all NWD Scholar activities, which includes retention services via mail by grant administrators prior to the beginning of the student's first semester at the Midwestern College. Attendance is taken at the seminars and that information is

forwarded to the grant administrators. Students who did not comply with the attendance

requirements were omitted from this study. In addition, students who were identified as

at-risk but turned down the opportunity were omitted from this study. Full-time students

are required to attend four seminars each year, but may attend as many as they wish. For

the purpose of this study, student's success was tracked for two semesters.

Data were scored by recording the dependent variable information into a

spreadsheet. The course completion data indicated the percentage of courses the student

completed during the second semester of enrollment. The two semester GPAs indicated

the student's performance during their first and second semester of enrollment. The

cumulative GPA indicated the student's performance on all coursework taken during the

nursing program through their second semester of enrollment. This GPA was compared

to the student's cumulative GPA prior to entering the nursing program and to the

semester GPAs. If a student has received a probation letter, this will indicate that the

student's GPA has dropped below an acceptable level and is on notice for dismissal. If

the student has been dismissed, this indicates that the student has not been able to obtain

an acceptable GPA and no longer qualifies to be a student at the Midwestern college.

The data that were collected are often used in the evaluation of success in

academic programs and are considered reliable measurements. Reliability is defined as

scores that are stable and consistent (Creswell, 2012). Carrick (2011) uses student

outcomes, such as GPA, to determine the effectiveness of nursing education. In a study

by Kruzicevic et al. (2012) the researchers used GPA, dismissal, and course completion

as standards to determine success in passing medical exams and graduation rates.

Although probation was not specifically identified, this measurement is determined by the student's GPA and the course completion.

The measurements that were used for this study: GPAs, course completion, and probation and dismissal notices are valid measurements. Creswell (2012) defined validity as the use of the instrument to measure what it is intended to measure. GPA, course completion, and probation and dismissal notices are intended to determine the success of students. As discussed in the above paragraph, these are common measures of student success and have been used as valid measures in previous studies.

Student Perception Data

A survey was used to collect data to evaluate the perceptions of students currently receiving retention services. The type of survey used was a cross-sectional survey design. Creswell (2012) defined a cross-sectional survey design as a survey that is given at one point in time to gather participants' viewpoints at that moment. Creswell (2012) also described cross-sectional surveys as useful tools in program evaluations for their ability to provide information to decision makers regarding future plans for a program.

The survey was sent to students via email, and was created using SurveyMonkey. This survey is an existing tool that has been used to gather self-reported information from students to measure student perceptions on engagement. The survey included 11 questions which measured the students' responses on a 5-point Likert scale. A Likert scale is described in Creswell (2012) as an interval scale which provides continuous responses for participants that have an assumed equal distance between each choice. Scores from the survey will range from 1 to 5, with "1" representing *strongly disagree*

and "5" representing *strongly agree*. Four additional open-ended questions asked for the participant's perceptions regarding what was useful, and which retention strategies were not used. In addition, participants were asked to recommend additional resources for future students.

The population of students who were eligible to receive this survey included only students who had received retention services. Students who were identified as at-risk but who had not received retention services were omitted from the list of recipients. All students who had received retention services received the survey through email. Students were also reminded of the survey through the researcher in person or by phone. The population included at-risk students enrolled at the Midwestern college. Fifty-four students received retention services, and 22 students responded to the survey. Students who have received retention services were asked to take an anonymous survey in order to gain insight into whether they perceive the retention services as positive influences on their academic performance.

Students were asked to sign a consent form (see Appendix B) which indicated the student's participation was voluntary. The survey entitled *Survey of Student Perceptions of Support Services, Persistence, and Belongingness* (Appendix C) was an existing tool that has been used to gather self-reported information from students to measure student perceptions on engagement (Reiner, 2012). Scores from the survey ranged from 1 to 5, with "1" representing *strongly disagree* and "5" representing *strongly agree*. Scores can range from 11 to 55. If a survey result is closer to 11 than to 55, this indicates the student does not perceive that the retention services are assisting in their success in the nursing

program. However, if a survey result is closer to 55 than to 11, this indicates the student

perceives that the retention services are assisting in their success in the nursing program.

Survey responses were initially recorded in Microsoft Excel, and then later transferred to

SPSS. Descriptive statistics were used for each question to determine the opinions of the

at-risk students who have received retention services.

The survey used in this research is a collection of two surveys that were merged

together to form the *Survey of Student Perceptions of Support Services, Persistence, and*

Belongingness (Reiner, 2012). Dr. Reiner merged the two surveys during research, and

granted permission to use this survey (see Appendix D). The two surveys were tested for

internal consistency by the original creators. The first survey, adapted from a tool

developed by Johnson et al. (2007) established face validity for the survey by consulting

with two survey development experts and 15 living-learning program administrators

regarding the clarity of questionnaire development. In addition, the survey was piloted in

2001 and 2003 with students from five separate universities (Johnson et al., 2007).

"Tests of consistency (Cronbach's alpha) on the instrument developed by Johnson, et al.

ranged from .62 to .90" (Reiner, 2012, p. 55). The second survey was developed by

Hoffman, Richmond, Morrow, and Salamone (2003) and included questions related to a

student's perceived sense of belonging to their college or university. In order to develop

face validity, once the 85-item survey was developed using the literature, the researchers

held 24 focus groups consisting of 15-30 students in each group. The students in the

focus groups took the survey, assessing the survey items for relevancy, clarity, and

conciseness and changes were made to items as necessary (Hoffman et al., 2003). "The

Kaiser-Meyer-Olkin measure of inter-relatedness for this instrument was calculated at 0.92" (Reiner, 2012, p. 55).

Since the students who receive retention services are identified at-risk students and are part of the NWD grant, I have access to this list due to my position at the Midwestern college. The students can be accessed by their college-issued email address. Creswell (2012) indicated that a 50% response rate is often published in leading education journals. A three-phase procedure was followed, adding additional steps in an attempt for a higher return rate. The three-phase procedure included notifying students in advance of the survey, sending the survey, and then sending a follow-up to the survey (See Appendix B). The additional steps proposed included a verbal reminder to students to complete the survey.

There were 54 students who had access to retention services since Fall 2011. Surveys were sent to all 54 students who had received retention services. Eight emails were returned as undeliverable. Phone calls were made to the students who had invalid emails, and two additional correct emails were obtained. Of the 54 students who received the survey, 48 students had valid emails. Three follow-up emails were sent to the students requesting their participation over a four week time period. Twenty-two students completed the survey, which is a 40.74% return rate. This return rate was lower than expected, possibly because many of the students who had received retention services during their first and second semesters had already graduated.

Community Interview Data

A one-on-one interview was conducted in order to gain insight from a key informant of the community's perspective of the Midwestern college's role in preparing for the future in healthcare. Creswell (2012) described a one-on-one interview as a form of survey collection where the researcher meets with an individual and collects responses to prepared questions. A semistructured interview was conducted. The semistructured interview included a list of prepared questions, but allowed for additional questions or dialogue during the interview as topics flowed in the conversation (Creswell, 2012).

The interview with a key informant was conducted to determine what perceptions the community held with regards to the Midwestern college and its role in health care, offering services to at-risk students, and assisting in opportunities or gaps in the community. The Midwestern college is a community oriented organization, and meeting the needs of the community is part of its mission. Seven open-ended questions were discussed with the key informant during the interview process, although additional questions were added during the conversation. The consent form and interview guide are referenced in Appendices E and F.

The interviewee was a human rights leader in the Midwestern community, and serves as a member of the college's diversity council. The community informant has been involved in many college and community activities and can speak to community issues and viewpoints. The informant also has enough working knowledge of the college's mission, goals, and actions to understand the connections between the college and the community and can provide insight on the community's behalf of strengths and

opportunities. I have served as a representative on a community committee with this individual for approximately 5 years, and had a professional relationship with the community member for 5 years. I approached this individual for input as we move forward in planning future programs and services, and he agreed to the interview. The interview took place at the informant's office, where the informant would feel more comfortable and able to focus on answering my questions. After the interview, I typed the notes and emailed them to him to check the content. Creswell (2012) suggested that member checking is one way to validate findings from an interview. To validate the dialogue in this interview, I sent the key informant a typed version of our interview and asked that the information be confirmed.

Data Analysis

Once data were collected in the spreadsheet, they were transferred to SPSS. The data were reviewed to assure that they were entered accurately and that no data were missing. This process is called cleaning data, and is described by Creswell (2012) as inspecting data for values that appear to be missing or outside of the range. The SPSS spreadsheet that was used to contain the data could be sorted in order to find data entered that was outside of the range. In addition, I sorted for missing data to ensure that all data were entered.

Using SPSS software, inferential statistics were used to determine the significance of the difference between at-risk students who had not received retention services as compared with at-risk students who had received retention services. Inferential statistics

are used when comparing two groups, reviewing the differences in the scores between the two groups and making inferences based on the differences (Creswell, 2012).

Inferential statistics are used to determine whether the scores obtained by the sample group are significant enough to make inferences to the entire population (Creswell, 2012). When testing a hypothesis, researchers set a confidence level that determines whether it is likely or not that the results obtained in the sample group can be generalized to the larger population (Creswell, 2012). Tipton et al. (2008) used inferential statistics in their research studies to determine if there was a statistically significant difference in students' nursing course grades and passing NCLEX-RN on the first attempt. In addition, inferential statistics were used to determine if there was a statistically significant difference between student's stress levels and their clinical assignments (Yucha et al., 2009). In this research, inferential statistics were used to determine if there was a statistically significant difference in student's course completion percentages, semester, and cumulative GPA, and receipt of a probation notice or dismissal notice, and their use of retention services. Students were placed in groups depending on whether or not they had the opportunity to participate in retention services.

In addition, one key informant from the community was interviewed to gather the perceptions on the efforts of the Midwestern college to fulfill the needs of the prepared nurses in the community. The perceptions of the interviewee recorded below are included to address Research Question 6. The key informant was purposefully selected due to the role played in the community and knowledge of the Midwestern college and the students, faculty, and staff. Purposeful sampling is defined as selecting an individual

based on the information they hold (Creswell, 2012). A one-on-one interview took place

in person and included open-ended questions from an interview guide (see Appendix F).

I asked the interviewee permission to record the interview. Once the interview took

place, I transcribed the interview and sent it to the interviewee to check its accuracy.

This process is called member checking (Creswell, 2012). The key informant's

perceptions provided information relevant to Research Question 6.

The data analysis approach I used for the interview was coding process. Coding

process is referred to by Creswell (2012) as a method to make sense out of text by

dividing it into categories or subcategories. I took notes of the interview on a computer;

therefore the typed notes were available for immediate review. As I reviewed the notes, I

noted what pieces of the text could be coded together because they were related.

Creswell (2012) also noted that often as the interviewer reviews the notes multiple times,

the codes may increase and get more detailed. The quantitative data in this doctoral study

represented a larger proportion of the data and the qualitative data were used as an

additional resource.

As described earlier, the research questions and the corresponding hypotheses,

and null hypotheses were as follows:

Research Question 1: Did at-risk students who received retention services have a

significantly higher percentage of passed courses than at-risk students who do not receive

retention services?

$H1_a$: There is a significant difference in the percentage of passed courses between at-risk students who have received retention services and at-risk students who have not received retention services.

$H1_0$: There is no difference in the percentage of passed courses between at-risk students who have received retention services and at-risk students who have not received retention services.

Research Question 2: Did identified at-risk students who received retention services have a significantly higher semester and cumulative GPAs than at-risk students who do not receive retention services?

$H2_a$: There is a significant difference in semester and cumulative GPAs between students who have received retention services and at-risk students who have not received retention services.

$H2_0$: There is no difference in semester and cumulative GPAs between at-risk students who have received retention services and at-risk students who have not received retention services.

Research Question 3: Were identified at-risk students who received retention services on probation significantly less than identified at-risk students who do not receive retention services?

$H3_a$: There is a significant difference of instance of probation between at-risk students who have received retention services and at-risk students who have not received retention services.

$H3_0$: There is no difference in probation status between at-risk students who have received retention services and at-risk students who have not received retention services.

Research Question 4: Were identified at-risk students who receive retention services dismissed significantly less than at-risk students who have not received retention services?

$H4_a$: There is a significant difference of instance of dismissal between at-risk students who have received retention services and at-risk students who have not received retention services.

$H4_0$: There is no difference in dismissals between at-risk students who have received retention services and at-risk students who have not received retention services.

Research Question 5: How did students rate their retentions services on the Survey of Student Perception of Support Services, Persistence, and Belongingness?

Research Question 6: What perceptions were offered by the key informant regarding how the Midwestern College supports students towards degree completion?

Results

The gender and age of the participants were included for descriptive purposes. Eighteen at-risk students were included in the group that did not receive retention services. This included 17 females (94%) and one male (6%), and their average age was 28.0 years. Fifty-four at-risk students were included in the group that received retention services. This included 39 females (72%) and 15 males (28%) and their average age was 29.94 years. An independent samples *t* test was conducted to evaluate whether student age for the groups was equal. The test was not significant, $t(70) = 1.02$, $p = .31$. A chi-

square test was conducted to determine whether there was a difference in gender between groups. The results of the test were significant, χ^2 (1, $N = 72$) = 3.86, $p = .05$. When describing the age of the participants, the mean age was calculated between group one and two to compare whether the groups were similar, while when describing the gender of the two groups, a percentage was calculated to compare the two groups. When describing the groups further with respect to the independent variables used to identify students based on economically or educationally disadvantaged, Table 2 indicates the descriptive statistics that were used and whether the test was parametric or nonparametric.

Table 2

Results of Archival Academic Data

Variable	Group 1 - Received retention services	Group 2 - Did NOT receive retention services	Total	Test statistic Sig level	Parametric/ Nonparametric test	Research question
Percentage of passed courses at conclusion of semester two	96.59%	94.17%	Not calculated	$t = .648$ $p = .52$	nonparametric	RQ 1
Cumulative GPA at enrollment	3.14	2.98	3.11	$t = 1.492$, p = .140	parametric	RQ 2
Semester GPA at end of semester one	3.27	3.20	3.30	$t = .504$, p = .616	parametric	RQ 2
Semester GPA at end of semester two	3.26	3.26	3.26	$t = -.002$, p = .998	parametric	RQ 2
Cumulative GPA at end of semester two	3.30	3.20	3.28	$t = .881$, p = .381	parametric	RQ 2
Number of students on probation at conclusion of semester two	7.4%	22.2%	Not calculated	χ^2, p= .083	nonparametric	RQ 3
Number of students dismissed at conclusion of semester two	3.7%	5.6%	Not calculated	χ^2, p= .733	nonparametric	RQ4

In the first research question, an independent samples *t* test was done to determine if the percentage of courses completed was significantly different between the at-risk students who received retention services and the at-risk students who did not receive retention services. The scale used for both the first and second research questions were ratio scales. In measuring both percentages of courses completed and GPAs, there are equal distances between units. Creswell (2012) describes ratio scales as having a true zero and having equal distances between units of measure.

An independent samples *t* test was conducted to evaluate the hypothesis that at-risk students who received retention services had a significantly different percentage of passed courses than at-risk students who did not receive retention services. Although the percentage of courses passed by at-risk students who received retention services was higher than the at-risk students who did not receive retention services, there was no significant difference, $t(70) = .648$, $p = .52$. The mean of courses passed by at-risk students who received retention services ($m = 96.59\%$, $sd = 14.23$) was not significantly different from the mean of courses passed by at-risk students who did not receive retention services ($m = 94.17\%$, $sd = 12.17$).

For the second research question, a repeated-measures ANOVA test was used to determine whether there was a significant difference in the means of GPAs over time between at-risk students who had received retention services and at-risk students who had not received retention services. Repeated-measures ANOVA tests may be useful when the same measure is observed over time under different conditions (Green & Salkind, 2011). A one-way within-subjects ANOVA was conducted. The dependent variable was

grade point average (GPA) measured four times: upon admission to an undergraduate

nursing program, after semester one of the nursing program, after semester two of the

nursing program, and the cumulative GPA at the conclusion of semester two. The

independent variable was whether or not the at-risk student received retention services

during semesters one and two of the nursing program. The means and standard deviations

for GPAs are presented in Table 3. The one-way repeated measures ANOVA was

calculated comparing the GPAs of participants four times: before admission, after

semester one, after semester two, and the cumulative GPA at the conclusion of semester

two (see Figure 1). The ANOVA showed that no significant effect was found, $F(2.00,$

$135.68) = 6.69$, $p = .11$). No significant difference existed among GPA means before

admission, after semester one, after semester two, and the cumulative GPA at the

conclusion of semester two. At the conclusion of semester two, the two groups of

students' semester GPA's were almost identical, regardless of whether the student

received retention services or did not receive retention services. This may indicate that

retention services assisted students more effectively during the first semester than later in

the nursing program. This may also indicate that retention services are the most effective

for students at the beginning of a program than they are later in the program.

Table 3

Means and Standard Deviations of GPAs

	Received retention services	Mean	Standard Deviation	N
Pre-Nursing GPA	No	2.98	.32	18
	Yes	3.14	.43	53
Semester GPA end of semester one	No	3.20	.56	18
	Yes	3.34	.44	54
Semester GPA end of semester two	No	3.26	.40	18
	Yes	3.26	.47	53
Cumulative GPA end of semester two	No	3.20	.52	18
	Yes	3.30	.38	53

Repeated-measures ANOVA require a test for sphericity (Tabachnick & Fidell, 2007). Sphericity can be defined as measuring the correlation scores between the dependent variables that occur over time to determine if they are similar. Since correlations are more likely to be similar between variables that are measured closer together in time, Mauchley's test can determine sphericity. If there is a violation of sphericity, additional statistical tests can be used to correct for the error (Tabachnick & Fidell, 2007). Using Mauchley's test statistic, sphericity can be either significant ($p <$ .05) or nonsignificant ($p > .05$). Mauchley's test was run, and the result was $p < .001$. This means that in this study, Mauchly's test statistic is significant and it is reasonable to conclude that the variances of the difference between GPAs are not significantly different.
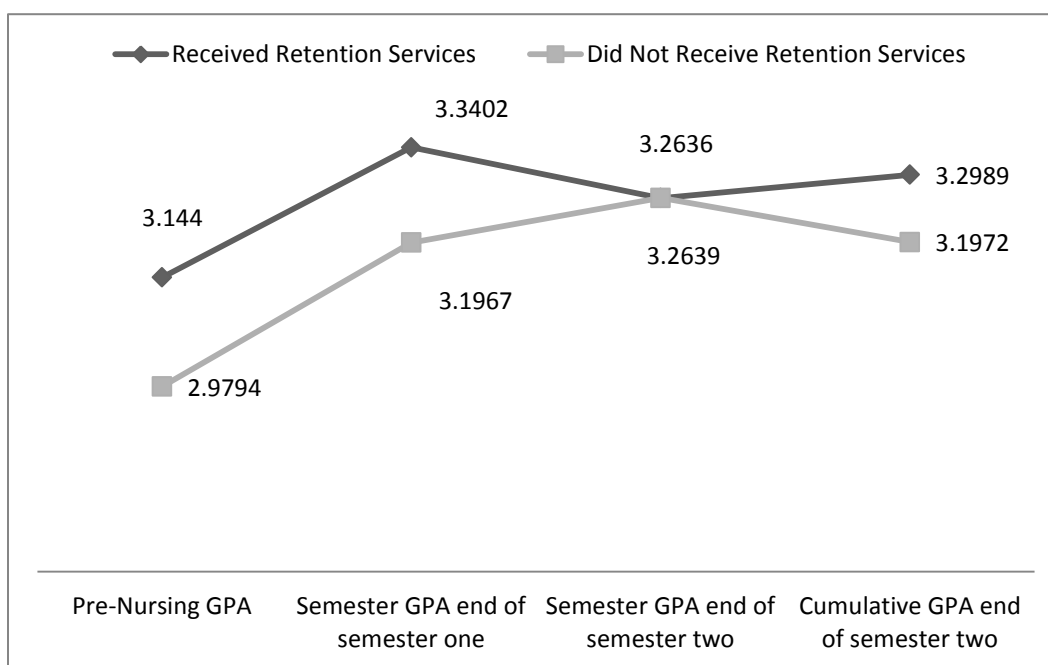
Figure 1. Difference in GPAs between groups.

The third and fourth research questions measured a category within a group comparison. A chi-square test was used since the research question was measuring a category within a group comparison of one independent variable and one dependent variable (Creswell, 2012). The scale used for the third and fourth research questions were nominal scales because the data were categorical. Creswell (2012) described nominal scales as having categories from which to choose to determine the characteristics or traits and have no order.

The chi-square test was done in Research Question 3 to determine whether at-risk students who received retention services were on probation less often than students who did not receive retention services. Of the 54 students who received retention services, 50

students were not on probation and four students were on probation. Of the 18 students

who did not receive retention services, 14 students were not on probation and four

students were on probation. An independent chi-square test was conducted to assess

whether at-risk students who received retention services were less likely to be on

probation during semesters one and two in the nursing program than at-risk students who

did not receive retention services. The results of the test were not significant, χ^2 (1, $N =$

72) $= 3.00$, $p = .08$. The proportion of at-risk students who received retention services

who were not on probation was greater than the proportion of at-risk students who did not

receive retention services, however the result was not statistically significant.

The chi-square test was done in Research Question 4 to determine whether at-risk

students who received retention services were dismissed less often than students who did

not receive retention services. Of the 54 students who received retention services, 52

students were not dismissed and two students were dismissed. Of the 18 students who

did not receive retention services, 17 students were not dismissed and 1 student was

dismissed. An independent chi-square test was conducted to assess whether at-risk

students who received retention services were less likely to be dismissed during

semesters one and two in the nursing program than at-risk students who did not receive

retention services. The results of the test were not significant, χ^2 (1, $N = 72$) $= .12$, $p =$

.73. The proportion of dismissed at-risk students who received retention services was

fewer than the proportion of dismissed at-risk students who did not receive retention

services, however, the result was not statistically significant.

Student Survey Results

The survey data were used to determine whether at-risk students perceived retention services have assisted them in the nursing program. The survey was conducted using a cross-sectional survey design. This type of survey design is described by Creswell (2012) as surveying a group of individuals to gather their perceptions at one point in time. SurveyMonkey was used for the collection method, and data were moved to SPSS for further analysis. Student responses to this survey reported below address Research Question 5.

Of the 54 students who were eligible to take the survey, 48 of them had valid email addresses on file. Twenty-two students responded to the survey, including 15 females, and 6 males. One respondent did not answer this question. Question 2 asked the respondents how many credit hours they had completed to date. Fourteen students responded to this question, and the answers ranged from 37 to 100. Some respondents did not answer with a numeric response, but indicated "graduated" or "too many to count."

Scores from the survey can range from 11 to 55. If a survey result was closer to 11 than to 55, this indicated the student did not perceive that the retention services were assisting in their success in the nursing program. However, if a survey result was closer to 55 than to 11, this indicated the student perceived that the retention services were assisting in their success in the nursing program. Final scores on this survey ranged from 17 to 55. The average score was 44.23. Based on the Likert scale used, the average score for all questions of 4.02 fell between the responses *agree* (4) and *strongly agree* (5). The

mode score was 55, and the median score was 43. Table 4 reflects the mean and standard

deviation for each survey question.

Table 4

Summary Survey of Student Perception of Support Services, Persistence, and Belongingness, N = 23

Survey Question	Mean	Std. deviation
I feel comfortable seeing the NWD advisor about my academic progress and coursework.	4.27	0.91
I believe the support services mentioned above (tutoring, retention seminars, NWD advisor and retention coordinator) are important to my academic progress.	4.23	0.73
I believe offering these support services demonstrates that my college supports me.	4.23	0.90
I feel comfortable meeting with the retention coordinator.	4.18	0.98
I feel comfortable using tutoring services and retention seminars to assist me in my coursework.	4.18	0.89
Meeting with the retention coordinator is helpful.	4.14	0.99
Tutoring/retention seminars are helpful.	4.09	0.79
I believe using these services (tutoring, retention seminars, NWD advisor, and retention coordinator) have already helped me achieve academic success.	4.09	0.73
Meeting with the NWD advisor is helpful.	4.00	0.95
I intend to return to the Midwestern College next semester.	3.59	1.56
I believe my experience using the services (tutoring, retention seminars, NWD advisor, and retention coordinator) have influenced my decision to return to the college next semester.	3.41	1.27

Although all but two questions received scores between 4.0 and 5.0, which

correlates to *agree* and *strongly agree,* the highest score received in the survey (4.27) was

in answer to the question "I feel comfortable seeing the NWD advisor about my academic

progress and coursework." Two additional questions that also scored high (4.23) were "I

believe the support services mentioned above (tutoring, retention seminars, NWD

advisor, and retention coordinator) are important to my academic progress," and "I believe offering these support services demonstrates that my college supports me."

The two questions that did not receive a mean score of at least 4.0 included "I intend to return to the Midwestern College next semester" and "I believe my experience using the services (tutoring, retention seminars, NWD advisor, and retention coordinator) have influenced my decision to return to the college next semester." As will be discussed in the limitations section, these questions no longer had the same relevance because most of the at-risk students who received retention services had already graduated from the Midwestern College. Therefore, their intent to return to the college was likely due to graduation, not because of academic issues.

Community Key Informant Interview Results

Several themes emerged from the interview notes. The most common themes included student/personal responsibility, family responsibility, and community responsibility. The interviewee discussed the importance of those three types of responsibilities and how their alignment is essential to the success of at-risk students.

Student/personal responsibility was the theme that emerged most frequently during the interview. "If you think the student is not successful, you wonder, did they have a realistic grasp of what is entailed in completing the program of study? Did they give it their all? Did they use resources?" The interviewee discussed the personal characteristics of students he knows, and described their most powerful characteristic as persistence. "They came in with a high intelligence level to allow adaptation into the profession." The interviewee also indicated it is important for students, regardless of

what profession he or she might pursue, to learn how to take personal responsibility for what is important to them.

Family responsibility was a second major theme that emerged from the interview. "We want the babies (children) to have a fighting chance, then we will focus on the structural constraints later, but it starts in the home and in the community." The theme of family responsibility went hand in hand with both personal responsibility and community responsibility. In fact, the three themes, personal responsibility, family responsibility, and community responsibility need to connect in order for our young people to be successful.

The final major theme from the interview was community responsibility. While the focus of this theme included the Midwestern college's commitment to the community, there were also suggestions on how families and communities need to work together. The interviewee suggested that academic preparation needs to happen very early. "Head Start programs are the current start, but we need more of them. Not all parents read to their children. We need to transfer our social values to our children and plant the seed of desire for our children to succeed."

In addition, the interviewee discussed the role of the Midwestern College in supporting students academically as well as socially. While the interviewee believes that the college is improving in its relationships with at-risk students, there is room for improvement. Since the Midwestern college is community oriented, it has an obligation to continue its outreach to the community it serves.

Assumptions, Limitations, Scope, and Delimitations

Certain assumptions were made regarding the populations that were studied. The first assumption included that the groups of students were similar to one another. Since the Midwestern college's admission criteria were the same between Fall 2010 and Fall 2013 admissions, the student's characteristics should have been similar to one another. In addition, as part of the data analysis, I conducted an analysis on the groups' characteristics, such as gender, age, and admission GPA to demonstrate that the groups were similar.

In addition to the assumptions listed above, there were assumptions made with regards to statistical tests. There is a possibility that the sample used does not accurately represent the population, which is called a sampling error (Creswell, 2012). Another assumption that was made is that the results of this research had the characteristics of a normal curve. A confidence level of .05 was used; however, this means there is still a possibility of error in the results.

Potential weaknesses of this program evaluation included the broad definition of educationally or economically at-risk students. It is possible that there were students who fit into the definition of educationally or economically at-risk, but have performed exceptionally well despite their circumstances. These participants may have impacted the outcomes of this study by making the results of retention services appear to have a positive effect on at-risk students when they may not have. In addition, although all identified at-risk students are required to participate in the same retention services, it is

likely that some did not take away the intended value that other participants took away from the services.

Another weakness is the low response rate from the survey sent to at-risk students who had received retention services. Since many students who had received retention services had already graduated from the Midwestern College, some of the email addresses were invalid. Although phone calls were made to potential participants with invalid email addresses, only two of the eight potential participants returned phone calls or provided a valid email address.

Delimitations of this study include the omission of evaluating the perceptions of the retention services by the participants through interviews. For the scope of this project study, I sought input from the participants through a questionnaire and while I did receive some valuable feedback from the students, it was limited regarding their perceived value of the retention services offered.

Limitations of Evaluation

Limitations of this program evaluation included, as discussed earlier, the possibility that there were students who have been classified as at-risk students who have overcome obstacles without the assistance of retention services, therefore skewing the results. In addition, it was also possible that since this program evaluation was conducted at the Midwestern College at which I am employed that I have insight into the possible outcomes of this evaluation and may not be able to be as objective as an external evaluator. However, an external evaluator also has challenges. External evaluators may have had difficulties establishing trust at the institution and the stakeholders in the

program may have felt as though an external evaluator did not have enough knowledge

about the setting to understand the program to make a valuable evaluation (Creswell,

2012).

An additional limitation is the small population of students who were available to

participate in this doctoral study. Of the students who were identified as at-risk students

and offered participation in the grant funding, 54 students agreed to participate. In

addition, there were only 18 students who were at-risk students admitted during the fall

2010. Finally, the response rate to the survey was not adequate. As discussed in the

results section, using G Power 3.1 software, the adequate sample size was calculated.

Based on a .03 effect size, and power at .90, the sample size should be 117. The sample

size used in this doctoral study was 72, which was not adequate.

Protection of Participants

A variety of methods were used to protect the data collected on the participants.

This doctoral study was approved by Walden University's Institutional Review Board as

well as the Midwestern college's Institutional Review Board and permission to conduct

the study was granted. Participants in the survey and interview component of the study

were given an informed consent form explaining the purpose of the study and informing

them that their participation in the study was voluntary. To help participants understand

the voluntary nature of their participation, the consent form indicated that they could

withdraw their participation at any time, and there would be no reward for participation

or punishment for nonparticipation. The informed consent form for the survey is

included in Appendix B and the informed consent form for the key informant interview is included in Appendix E.

In addition, a data agreement was in place with the Midwestern college, and the only individual with access to the data was me. Due to my position within the Midwestern college, I already had access to the database where all relevant data were stored. The participant's names were removed from the data as soon as all of the data were collected. During the time when the participant's names were attached to the data, the data were stored on a password and firewall protected server. After the data were compiled, any identifying student information was deleted. Data were stored electronically on my personal drive on the Midwestern college's server, which is password and firewall protected. After the five year minimum, all data containing identifying student information will be deleted from its electronic location.

Recommendations

In the evaluator role during this program evaluation, several recommendations were identified. Included are recommendations for pre-college programming, and the continuation of retention services. In addition, there is a recommendation for an added service that may increase retention as well as updates to how and when retention data are collected from students and how "at-risk" students are defined.

The first recommendation is the continuation of nurse camp for at-risk high school students in this community. This program has been a great opportunity to bring high school students from diverse backgrounds to campus and immerse them in the nursing profession for 6 weeks. This program also provides instruction in math and

science skills so the students can excel in future classes that are essential for high school success and entry to college. The students who attend nurse camp are given a stipend, which is key for initial enrollment in the program. Although nurse camp is free for attendees, the stipend is offered to students so they do not feel they need to choose between attending nurse camp and working during the summer months.

An additional recommendation involving nurse camp is to have reunions annually to reconnect the students with one another and with the campus. An attempt to keep these potential nurses connected may help motivate the students to stay on track for high school success and to continue in college-bound high school classes. Mentoring these students after they have graduated from nurse camp may also encourage them to take courses at community colleges while a high school student. Nurse camp advisors could assist these students with the process on enrolling in college-level courses during their junior and senior years in high school.

Since the timing of when surveys were collected from students was not ideal, it is recommended to add questions regarding student perceptions of retention services to the exit interview that is conducted by the department dean. Changing the timing of the data collection may result in a higher return rate, therefore including the perceptions of more students.

The definitions used for "at-risk" students and "success" were very broad in this doctoral study. It is recommended that more specific definitions be used, and students classified in levels, such as "very at-risk" and "somewhat at-risk" and that the levels of success also be broadened to include "passed class," "graduated" and "passed NCLEX-

RN." This may assist in determining future retention services for students who come to the Midwestern college with multiple "at-risk" identifiers when compared with students who have only one or two identifiers.

Although the results of archival data did not indicate there was a statistically significant difference between at-risk students who received retention services and at-risk students who did not have access to those services, the survey results indicated a positive view of the services offered and of the college for offering services. Retention services have expanded since their inception, and should continue to do so based on the needs of the students. It is recommended that an evaluation of archival data continue each year. In addition, conducting a survey of the students who received retention services is also recommended to ensure the services offered are used and that students feel positively about the services.

An additional recommendation is to add an advising or mentoring component to retention services. Students who have received the grant dollars have been assigned to the same advisor. As the students move beyond semesters one and two in the nursing program, the addition of peer advising or mentoring may also benefit retention rates of this group of students. This addition will take resources, as the advising or mentoring will need to be developed, advisors or mentors will need to be trained, and someone will need to monitor the program. This could result in additional staff in the office of retention services.

Finally, including retention services in orientation activities may promote the services to students who may not otherwise take advantage of them. Asking students to

identify what helps them succeed academically and connecting those successes to the

services offered in the retention office may help the students understand the purpose of

the retention office. The word "retention" sometimes creates a negative connotation.

Renaming the office may also help with a more positive view of the services offered.

Conclusion

This research was conducted to determine whether there was a difference between

at-risk students who had received retention services and at-risk students who did not

receive retention services. To investigate this question, a formative program evaluation

was done to determine the differences between the two groups of students in GPA, course

completion rate, and instances of probation and dismissal. The design was a

retrospective quasi-experimental study, which included data from the Midwestern

college's database. Using the data collected, the researcher determined whether a

significant difference existed using *t* tests, a one-way repeated measures ANOVA and

chi-square. In addition, the students who had received retention services were surveyed

to determine if they perceived that the retention services helped them succeed in the

nursing program. Finally, a member of the community was interviewed to obtain their

viewpoint on the contribution the Midwestern College was making to health care in the

community.

As part of the doctoral study project, results were compared with the outcomes of

a grant received by the Midwestern college to determine whether the outcomes were

being met. The results comparison with the grant outcomes were reported to the

stakeholders of the Midwestern college in a white paper format. The stakeholders can

use this information to determine the future of the retention services offered.

Section 3: The Project

Introduction

This project study was an evaluation of retention services offered at a Midwestern college, which targeted students who were considered educationally or economically disadvantaged. The program evaluation was designed to determine whether the retention services offered to educationally or economically disadvantaged students improved the students' GPA and course completion rates or lowered the instance of probation and dismissal. A formative evaluation design was used to determine possible opportunities for future at-risk students. A mixed methods design was used to collect data. Quantitative methods included collecting archival data regarding the students' grade point averages and instances of probation and/or dismissal. In addition, a survey link was sent to students via email to collect perceptions of the retention services available. Qualitative data included an interview of a key informant in the community to determine the perceptions of the community regarding the Midwestern college. The findings of the data collected were generated to give the Midwestern college feedback regarding past student success and perceptions as well as to find opportunities for improvement for future students.

Description and Goals

As part of my project study, I developed a program evaluation of retention services offered to at-risk students enrolled in a prelicensure nursing program at a Midwestern college. The program evaluation was developed to determine whether the retention services offered by the college were increasing the likelihood of success of

identified at-risk students. Success was defined in several ways, including the student's

percentage of passed classes, first and second semester GPAs, and instances of probation

or dismissal. In addition, a survey was presented to students who had received retention

services to determine their perceptions of the services offered. Finally, an interview was

conducted with a key informant to gain insight on the perceptions of the community

regarding the Midwestern college. The results of the program evaluation will be

presented to the grant administrators as an evaluation report. The goals of the evaluation

report are to communicate the results of the program evaluation and provide data relevant

to the retention services offered and the impact on the students who received those

services. In addition, the evaluation report will include feedback from students who have

received retention services, feedback from a community member, as well as

recommendations that I formed while completing this program evaluation.

Evaluation Report

A formative evaluation design was used in this project study due to the nature and

timing of the evaluation. Frye and Hemmer (2012) described a conducting a formative

evaluation as collecting data while a program is taking place and sharing results from the

collected data with the program administrators so that changes can be made during the

program. While retention services were developed, implemented, and paid for as part of a

grant, the retention services were designed to continue indefinitely. The evaluation was

conducted to determine whether the at-risk students who received retention services had a

higher percentage of passed classes and higher semester GPAs during their first and

second semesters, as well as whether they were less likely to be on probation or

dismissed from the college than at-risk students who had not received retention services.

A program evaluation was chosen because no evaluation had been conducted since the

grant's inception.

The mixed methods design was used to determine the effectiveness of retention

services by collecting academic archival data, perceptional data from the student

perspective, and perceptional data from the community. Different tools were used to

collect these data. The archival data tool used was the college's academic database. The

Survey of Student Perception of Support Services, Persistence, and Belongingness was

used to gather the perceptions of the students who had used retention services, and an

interview guide was created to gather the perceptions of a member of the community.

During the data analysis phase with the archival data, an independent t test was

conducted to determine whether at-risk students who had received retention services were

more likely to pass classes than at-risk students who had not received retention services.

While there was a difference between the two groups in pass rates, the difference was not

significant. The mean of courses passed by at-risk students who received retention

services ($M = 96.59\%$, $SD = 14.23$) was not significantly different from the mean of

courses passed by at-risk students who did not receive retention services ($M = 94.17\%$,

$SD = 12.17$).

A repeated-measures ANOVA test was used to determine whether there was a

significant difference in GPAs of the two groups over time. While there was a difference

between GPAs of at-risk students who received retention services and at-risk students

who did not receive retention services, the difference was not significant. The

cumulative GPA at the conclusion of the second semester for at-risk students who

received retention services was 3.30, which was greater than the 3.20 cumulative GPA of

at-risk students who did not receive retention services.

Chi-square tests were used to determine whether at-risk students who received

retention services were on probation and dismissed less often than at-risk students who

did not receive retention services. Again, the results indicated that at-risk students who

received retention services were on probation or were dismissed less often than at-risk

students who did not receive retention services; however, the results were not statistically

significant.

During the data analysis phase with the survey data, a one-sample statistical test

was conducted to determine the mean and standard deviation of each question. Nine of

the 11 questions received scores between 4.0 and 5.0, which correlates to *agree* and

strongly agree. Finally, coding was used in the interview data to determine themes

throughout the interview, which included personal responsibility, family responsibility,

and community responsibility.

As retention services had not been evaluated since their inception in the fall of

2011, the evaluation report will provide data that will speak to strengths and weaknesses

in existing retention services and will offer recommendations for future programming. In

a study conducted by Casstevens, Waites, and Outlaw (2012), a retention program for

nontraditional students was evaluated. A formative evaluation was conducted to

determine whether support group meetings for Master of Science in Social Work (MSW)

students increased their perception of social support. When the formative evaluation took

place, very few students were attending the support group meetings. Due to evaluating

this retention effort, it was discovered this tactic was not increasing the students'

perceptions of social support, as was intended. In this study, the evaluation process was

important in order to identify weaknesses in the retention program and to move forward

with different tactics (Casstevens et al., 2012). The evaluation report in the current study

was designed to identify tactics that were increasing retention and tactics that were not

having an impact. The evaluation report will address the statistical findings so that the

staff of the retention office can make data-based decisions for future retention services.

Review of the Literature

In order to obtain information related to this program study, several literature

searches were conducted. Databases used to conduct the literature review included

ERIC, MEDLINE, CINAHL, Nursing & Allied Health Source, Health and Medical

Complete, PubMed, and Academic Search Complete. Terms used in the search for

literature focused on *program evaluation* and *evaluation reports*. This review of

literature is organized to include formative evaluations, recommendations for program

evaluators, evaluation reports, and using evaluation reports to impact policy.

Formative Evaluation

Darussalam (2010) indicated that all programs need to be evaluated in order to

determine whether they are effective or not effective. A program evaluation can be

defined as understanding the program well enough through information gathering and

review to determine what is contributing to the success of the program and any possible

improvements (Frye & Hemmer, 2012). A program evaluation can be conducted before

beginning a program; in the middle of a program, as in this research; or at the conclusion of a program. The most compelling reason for using a formative evaluation in this study was the timing of the evaluation. A formative evaluation is described as finding methods for further improvement or management of a program (Patton, 1982). As the retention services will be offered to students moving forward, it was the most logical type of evaluation to conduct.

As discussed in Section 2, the Evaluation Research Society Standards Committee has identified six types of evaluation that are defined by the type of evaluation that is conducted as well as the types of activities conducted during the evaluation (Patton, 1982). Formative evaluation is one of the six types of evaluations described. Other types of evaluation include front-end evaluation, evaluability assessment, impact evaluation, program impact evaluation, and evaluation of the evaluation (Patton, 1982). Based on the six types of evaluation identified previously, the formative evaluation was the most logical choice.

A formative evaluation was conducted by Enterkin, Robb, and McLaren (2013) in order to determine whether leadership training was effective for training potential ward leaders. After the first cohort of students went through the training, a change was made due to the evaluation of the program by that cohort. In addition, a formative evaluation process was used in an evaluation of a distance-based chemistry laboratory (Brewer, Cinel, Harrison, & Mohr, 2013). After a group of students took a distance-based chemistry lab, an evaluation was done of their experiences in order to make changes to future distance-based lab sections. Another study involved students enrolled in a

residency program for family practice who were required to do a simulation experience as part of the residency. As the program progressed, a formative evaluation method was used to determine whether the simulation was effective (Curran et al., 2012). The formative evaluation model used in all three of these evaluations had an impact on how the program continued for future students or residents.

Although none of the evaluations described above eliminated parts of the respective programs, there were changes made. Leadership training was changed to a more accommodating time for the participants (Enterkin et al., 2013). The distance-based chemistry labs underwent changes in several of the separate experiments to ensure that students' distance labs would result in intended outcomes just as an on-ground lab would (Brewer et al., 2013). The simulation done by residents in a family practice program determined that the simulation was effective, but moved it in the curriculum placement to use for the first exposures to family practice rather than using it throughout the residency (Curran et al., 2012). If a formative evaluation process had not been used, each of these evaluations would have continued to use an ineffective method during the evaluation.

A program evaluation can provide data that will help determine whether a program is doing what it should be doing. Frye and Hemmer (2012) described a program evaluation in terms of having enough understanding of a program to ask questions related to the program that will determine its success. This program evaluation was conducted in order to determine whether retention services were effective and whether the goals and

outcomes of a grant were being met. As the retention services had not been evaluated in the past, it was important to find out whether the program was succeeding.

There are many models of program evaluation. While the grant received by the college has specific goals and objectives, there are many other outcomes that can be determined by evaluating the retention services. Through data collection, the formative evaluation model is used to determine whether the program can be improved (Patton, 1982). Although the intent of this program evaluation was to help determine whether the goals of the grant were met, the evaluation has also brought forth information that is not part of the grant's goals and outcomes. Sandahl (2010) conducted a program evaluation to determine whether a collaborative testing environment would increase testing scores. While increased testing scores were the goal of this program evaluation, additional information was learned about collaborative testing that might not have been learned had no program evaluation taken place. Other information was gleaned from this study, including the finding that students who tested collaboratively fostered knowledge, critical thinking skills, and group process skills (Sandahl, 2010). The formative evaluation model allows the evaluator to make recommendations about what might make the program better (Patton, 1982). Part of the rationale for conducting a formative evaluation in this doctoral study was to include improvements to the current structure of retention services.

Research-Based Recommendations for Program Evaluators

Effective program evaluations are done by asking the right questions. Haji, Morin, and Parker (2013) discussed the importance of asking questions regarding program evaluation that extend beyond whether or not a program achieved the outcomes

put in place prior to the program evaluation. Understanding that there is worth beyond

the intended purpose of a program evaluation opens the doors to determine what is

happening within programs and why certain strategies within programs are working or

not working (Haji et al., 2013). In this doctoral study, while the hypotheses were not

supported by the archival data collected, there were growth opportunities for retention

services. Even though the hypotheses were not supported, there are still lessons to learn

with regards to the retention services at the Midwestern college. Once the decision has

been made to conduct a program evaluation, determining the best outline to follow can be

an important first step.

There is other literature that indicates that an effective evaluation asks questions

that go beyond the program's identified outcomes. A medical ethics course was

evaluated to determine whether attendance in the course had a long-term impact on

physician ethics (Parran, Pisman, Youngner, & Levin, 2013). This course had specific

outcomes related to the future performance of physicians; however, additional

information was gathered from this program evaluation that was not an identified

outcome. Another study reviewed satisfaction of MBA programs worldwide. Very

specific questions were delivered by survey to MBA students to determine specific

information regarding processes, academics, support services, and socialization. Through

this semistructured survey, the researchers also gained information that went beyond the

outcomes of this study (Bentley, Selassie, & Shegunshi, 2012).

In a peer-mentoring program among researchers in Canada, Furimsky, Arts, and

Lampson (2014) discovered that although their program evaluation had clear outcomes,

interactions between the two people in a mentoring situation are not always predictable.

The physicians who took part in the medical ethics course mentioned above also created

their own outcomes and wrote about them in a reflective summary after the course was

completed (Parran et al., 2013). Similarly, the information gained from the students in

the MBA programs not only indicated a high level of satisfaction with the program, but

also indicated that the worldwide sample used to evaluate the program was aiding in the

evaluation of global eLearning (Bentley et al., 2012). All three of these studies are

examples of how program evaluations often evaluate far more than the outcomes of the

program.

Once the outline of the program evaluation has been determined, the researcher

must then determine the methodology. In this program evaluation, a mixed methods

design was used, and both quantitative and qualitative data were collected. In the

literature, there were several studies that used mixed methods to conduct a program

evaluation. In a study by Wallis and Kennedy (2013), standardized tests, participant

observations, and group interviews were used to collect data for the evaluation of a

training program that was designed to promote retention in nurses. The results were two-

fold, because this evaluation involved reviewing the success of nurses as a group, as well

as the success of retaining individual nurses. The researchers found that if the group was

not successful at retention, it was less likely that the individuals within that group would

be successfully retained (Wallis & Kennedy, 2013).

In this study, student perceptions were collected by using a survey to determine

the success of retention services. Other studies have also used self-assessments to

determine the success of a program. In a study by Hosseini, Ghalamkari, Yousefshahi, Mireskandari, and Rezaei Hamami (2013), a survey was used to determine whether a training program for cardiopulmonary-cerebral resuscitation (CPCR) was more successful using a problem-based method or a lecture-based method. The participants in the CPCR training were asked to do a self-assessment after their training, and the self-assessment was the same for both groups of participants. The researchers found that the participants who attended the problem-based training rated themselves as more knowledgeable than the participants of the lecture-based training (Hosseini et al., 2013). The researchers also found that self-assessment scores were high based on the students' perceptions of retention services. While self-assessment scores may not be as black and white as standardized tests, the information can be useful for evaluations.

Literature indicates that program evaluations typically follow a specific plan, regardless of the type of program evaluated. Patton (1982) suggested that many times evaluations begin with specific objectives, but as the evaluation is conducted, additional information materializes. Patton (1982) focused on goal-free evaluations, and while this is not a goal-free evaluation, important information has come to light that goes beyond the goals of the evaluation. In a program evaluation conducted by Spielberg et al. (2011), an initial evaluation plan was formed regarding mobile outreach and HIV testing and motivating individuals in an at-risk community by bringing the screening to them. The evaluation plan that was formulated in a study by Dudek et al. (2012) included specific training of how to complete clinical evaluations of students in a clinical-based course. The plan used by Dando, d'Avray, Colman, Hoy, and Todd (2011) was to evaluate the

integration of students in multiple health care disciplines to work together during clinical experiences. In all three examples, the program evaluation had a specific plan in place prior to the program evaluation taking place.

The evaluation conducted by Spielberg et al. (2011) did show positive results regarding reaching out to a population that historically did not go to a static site for HIV testing. The clinical evaluation training done in the Dudeck et al. (2012) study was also reported as a success. After attending a faculty development workshop to perform clinical evaluations, the scores of the evaluations represented the impact of the workshop on the faculty's ability to be trained in assessment. As the evaluation of integrating students from multi-disciplinary health care programs concluded, the students participating indicated a better understanding of how the different facets of a health care team work together (Dando et al., 2011). The student's responses to this program were positive for students, faculty, and staff. All three of these program evaluations as well as the program evaluation in this doctoral study began with an evaluation plan in place to conduct the evaluation in a structured way to make sure the information was useful for the future.

Once the methodology and evaluation plan are in place, data collection for the program evaluation can begin. Using a variety of methods of data collection can make the evaluation richer and more in-depth. Patton (1982) indicated that a mixed methods approach is less vulnerable to error since using only one method relies so heavily on that one source. Using multiple methods allows for multiple perspectives. Sandahl (2010) used a mixed methods approach and collected data which included using scores from

standardized tests as well as the perceptions of nursing students who were exposed to collaborative testing. In addition, in an evaluation by Brewer et al. (2013), the data collected included quantitative data from laboratory reports and quiz scores as well as qualitative data collected from reflective journaling while evaluating how taking a lab course online would compare with taking a face-to-face on-ground lab course. Haan, Britt, McClellan, and Parks (2010) used course evaluation results to describe the perceptions of students who completed course evaluations and the expectations that the evaluation process was their voice in curriculum. The evaluation done in this research project also used a mixed methods design to include both quantitative data, including student GPAs and course completion ratios, and qualitative data which included student and community perceptions of the Midwest college.

In the evaluation of collaborative testing conducted by Sandahl (2010), there was no statistically significant difference between students who experienced testing collaboratively and students who tested on their own. However, qualitative data regarding the student's perceptions of collaborative testing were very positive and the students felt they learned more and had positive interactions with their classmates. The positive interactions are an asset for nurses to acquire prior to working in hospital or clinic settings (Sandahl, 2010). Similarly, in the evaluation conducted by Brewer et al. (2013), the quantitative data were not statistically significant for students who completed the distance chemistry lab when compared with students who completed the face-to-face lab. However, students reported increased satisfaction with the distance chemistry lab, as it allowed them more freedom for completion during a time that best fit the student's

schedule. Haan et al. (2010) also indicated that students were satisfied with the input they had in coursework due to the course evaluation process. In the evaluation done in this doctoral study, the quantitative research was not statistically significant with regards to student performance, however, the student and community perceptions were positive. This indicated that while statistically significant differences were not found with regards to the data analysis, the positive nature of the participants should be taken into consideration.

The results section should include both findings as well as recommendations (Patton, 1982). It is important for the findings to be presented clearly and separately from the recommendations. The findings that are presented are based on the evaluation that was conducted and presents the data that were collected. Presenting these data in graphs and tables allows the stakeholder audience to have a vision of what the data showed. Recommendations are not the same as data. The recommendations may be made based on the data presented, but they are opinions of the evaluator regarding what might improve the program given the data presented (Patton, 1982). Including the findings prior to recommendations will allow the audience to first understand the facts of this evaluation followed by opinions of the evaluator based on the facts. Enterkin et al. (2013) presented results in a study about preparing future unit leaders in a hospital that was inclusive of both findings and recommendations. Another study focused on increasing retention for students enrolled in a doctor of physical therapy program by implementing a student success program (Noonan et al., 2012). The results section in this study also included both the findings as well as recommendations for program

improvement. Kenny, Kidd, Nankervis, and Connell (2011) highlighted both findings and results from a questionnaire prior to discussing the recommendations in their study involving differences in nursing education for mature students. Finally, Curran et al. (2012) presented results in both graph and table form by using findings as well as recommendations in the study conducted using simulated labs in a family practice program. The sequence of the presentation is important to gain the trust in the audience presenting the evaluation results prior to delivering recommendations (Curren et al. 2012).

Evaluation Reports

According to Young et al. (2012), evaluation reports are most helpful when presented using visual aids as well as verbiage so the audience is able to visualize the results of the research. While response rates, descriptive, and inferential statistics are necessary, simple graphs and tables can be understood if your audience has not had statistical training (Young et al., 2012). An evaluation report was submitted to the United States Department of Education (2013) by the Institute of Education Sciences and was organized to include both detailed statistical information as well as visual aids. Understanding the audience who will receive the evaluation report is important in order to make sure the findings of the evaluation are communicated effectively.

The format of the different evaluation reports reviewed had a similar template. The evaluation report includes an executive summary, background, and design, findings of the evaluation, tables and figures, a reference list, and appendices (United States Department of Education, 2012; United States Department of Education, 2013; United

States Department of Education, 2014). While there were variations in the evaluation reports, there were consistent themes that can be used as part of the evaluation report submitted to the Midwestern college.

Using Evaluation Results to Impact Policies

In order to make changes and keep resources in retention services, the evaluation report must present the information in a compelling way. While the archival data were not statistically significant in this study, there were data to support that retention services have an impact on students. The survey delivered to students who had received retention services evaluated the services positively and the community member indicated that support for at-risk students was noticed in the community. These aspects of the evaluation indicate the positive impact retention services have on students and the reputation of the college in the community. One way to gain the support of program directors or other stakeholders in the continuation and improvement in retention services is to keep them informed.

There is literature indicating that minority or underrepresented students have unique retention needs. Muma and Pries (2010) were able to address the ethnic, racial, and social representation among healthcare workers in a predominately white community with the results of their program evaluation. After receipt of a Workforce Diversity Grant, an evaluation was conducted to determine how the grant enhanced training culturally competent students, the number of minority or underrepresented healthcare workers serving as preceptors or faculty members of a Physician's Assistant program and whether the number of minority and/or disadvantaged applicants rose. Ultimately, the

goal was to graduate more minorities and/or underrepresented Physicians into the local workforce (Muma & Pries, 2010). Another study specifically addressed African-American men in a retention program seeking to assist the students during their first year of college (Brooks, Jones, & Burt, 2013). This study also focused on the importance of minority or underrepresented students finding a connection on campus as a tool for success. Similarly, Strayhorn, and DeVita (2010) investigated what the specific educational needs of African-American males were and how they were met differently at historically black colleges compared with other types of institutions. Kramer, Roemer, Liljenquist, Shin, and Hart (2014) evaluated a program that encouraged at-risk students to determine barriers and address them on their own.

McGonagle et al. (2014) reviewed a program called "STRONG-CT" in Connecticut that attempted to increase the interest in minority and underrepresented students into the Science, Technology, Engineering, and Mathematics (STEM) majors. The retention program in this study focused on psychological variables such as self-efficacy, sense of belonging, stress, and study habits. Another study focused on International student success when studying nursing in a new country. After retention issues were identified, a retention program was developed called "Opportunity for Success" (Arieli & Hirschfeld, 2013). This retention program was similar to the Brooks et al. (2013) study as it identified that a connection to campus was a necessary aspect of success. Grant funding was also used to develop a program that is similar to the program at the Midwest College and similar to the programs by Arieli and Hirschfeld (2013) and Brooks et al. (2013). The scholars program focused on mentoring African American

students in STEM fields (Kendricks, Nedunuri, & Arment, 2013). Historically at this

college, the number of STEM degrees awarded to African Americans had been declining.

Muma and Pries (2010) reported that the results from their study indicated an

increase in cultural competency, exposure to clinicians that are underrepresented in the

Physician Assistant profession, and the number of minority or underrepresented

applicants increased. Brooks et al. (2013) had similar positive results. There was a

statistically significant difference between African-American males with regards to

academic acculturation and in the mentor/mentee relationships that were evaluated in this

study compared to others that were not receiving these services (Brooks et al, 2013).

Students in the "STRONG-CT" program performed better academically than the control

group (McGonagle et al., 2014).

Arieli and Hirschfeld (2013) found that the implementation of "Opportunity for

Success" was a benefit to the International students on campus. While there was not a

comparison group with which to compare, the International students' performance was

better than the International students' prior to the inception of this program (Arieli &

Hirschfeld, 2013). Strayhorn and DeVita (2010) were also able to find specific niches

where African-American males were more successful, although the type of institution

was not what the researchers hypothesized. These men had better success at a master's

institution and the least success at liberal arts colleges. Using self-identification

strategies, Teens making Activity and Environmental Modifications (TEAM) taught the

individuals to identify the systematic barriers and determine what modifications or

strategies they could use to help address the barriers (Kramer et al., 2014).

Kendricks et al. (2013) found that the African American students who received stipends from the grant evaluated the mentoring services positively. Results of this study also indicated that students gradually improved in STEM courses over the semester, with the greatest improvement shown during the last 5 weeks of the semester (Kendricks et al., 2013). While minority and underrepresented student retention is most predominant in the literature regarding retention rates in postsecondary institutions, there have been other groups of students who may be considered at-risk and may need special services in order to be successful. This includes nontraditional students, second year students, and students who have been unsuccessful in the past.

Casstevens et al. (2012) indicated that the needs of a nontraditional student differ from traditional students because they are often juggling families, work as well as school responsibilities. Using a formative evaluation process, the institution determined that offering optional services to this group of students was counterproductive (Casstevens et al., 2012). Students who have been unsuccessful in the past, either due to withdrawal or failing a course, are also at-risk. Peer tutoring was implemented for this group of at-risk students, and the goal of peer tutoring was to offer academic and emotional support (Bryer, 2011). Kennedy-Phillips and Uhrig, (2013) also found a group of students who were at-risk. Sophomore students at campuses where first-year programs were in place sometimes felt abandoned which created a retention issue.

While none of these studies indicated that the students felt a lack of connection with the college or university, as the minority or underrepresented students felt, there was mention of connection with faculty members or mentors (Bryer, 2011; Casstevens et al.,

2012; Kennedy-Phillips & Uhrig, 2013). Evaluations of these groups were quite different. The nontraditional students indicated there was not a significant impact on their success that could be tied to the retention services offered (Casstevens et al., 2012). However, the evaluation done with peer mentors and second year students did indicate an impact on retention with increased faculty involvement and mentorship (Bryer, 2011; Kennedy-Phillips & Uhrig, 2013). Retention programs are often unique to a specific population of students, and when evaluations of the programs are done then changes can be made to increase their effectiveness.

Often, when services are developed for any group of students, other students not considered at-risk may benefit as well.   Fontaine (2014) evaluated a retention program that was in place for all students on campus where the goal of the retention program was to increase graduation rates of a nursing program. After the evaluation, it was determined that the biggest impact of the retention services was the mandatory orientation prior to arriving on campus. Other services such as peer-counseling, tutoring, community nurse mentoring, and academic planning were not all mandatory programs (Fontaine, 2014). Results indicated that some of the retention services offered did increase the graduation rates, but not all of the activities expected to increase graduation rates did so. The evaluation of this program may be increasingly useful if subgroups were evaluated to determine if certain groups of students benefited from the retention services, therefore increasing the graduation rates of those groups.

Implementation

Resources and Existing Supports

Since the inception of retention services and receipt of the grant, the services which support at-risk student success have increased. Although grant funding ended in October 2014, retention services will continue at the expense of the college. This means that many of the services that were initially paid for by grant dollars have now been absorbed into the college's operating budget. The evaluation report will report success indicators and data that will help the Midwestern college make decisions regarding what services may be attributed to student success. In addition, the evaluation report will report perceptions of the students who received retention services and will include the comments made by the community member who was interviewed.

Resources needed to continue with the existing retention services include funding that will be both indirect and direct. The indirect costs will be the salaries of the individuals who have the most contact with the students who are considered at-risk. While the salaries will be paid to these employees regardless of whether the grant tactics are maintained, this does mean that additional employees may be needed to assist with the additional services that are offered. The individuals whose salary, at least in part, has been paid for by the grant include the Office of Diversity Services Coordinator, the Retention Coordinator, and the Financial Aid Coordinator. Portions of each of these individuals' salaries were charged to the grant over the last three years. The retention and financial aid offices have or will have to hire additional staff within the next year to ensure the workload is manageable.

Additional resources include the maintenance fees for retention aids, such as Tutor.com and StudentLingo. While the upfront costs for these types of retention aids were initially paid for with grant dollars, maintaining them will be part of the required resources needed to continue with the existing services. Finally, student scholarships and stipends will also be part of what was previously funded in the grant that will now either be eliminated or will be a part of the college's operating budget.

Potential Barriers

Potentially, the largest barriers for the continuation of retention services will be the funding that comes from the college's operating budget and the ability to find employees for the retention office. If the scholarships and stipends are not funded, then part of the grant's intent will be compromised as students may need to work additional hours to make up for the money. In addition, with the increased visibility of the retention office by at-risk students, additional employees are needed to cover the demand. If trained employees cannot be found, this could also be a barrier for the continuation of retention services.

Proposal for Implementation and Time Table

The evaluation report will be distributed to the leadership of the Midwestern college by the end of 2014-2015 academic year. The report will include the suggestion for continuous evaluation and inclusion on the college's assessment plan so retention services can be evaluated annually. In order to be included on the college's assessment plan (CAP), outcomes of retention services will need to be linked to the goals of the college. This will require discussion and collaboration with the college's Coordinator for

Institutional Research and Effectiveness. The recommendation will be for inclusion of retention services on the CAP for the 2015-2016 academic year.

The implementation of other retention services, as presented to the leadership of the Midwestern college will ultimately be determined by that group. Since this college's budget cycle is done in a calendar year and not an academic year, most services have already been budgeted for during the 2015 year. Budgeting for 2016 will begin in June 2015, so I will encourage the leadership team to make final decisions by the end of May 2015. I will include suggestions for continuation of certain retention programs and possible adjustments in other retention programs.

Roles and Responsibilities of Students and Others

The roles and responsibilities of others are defined in the evaluation report. Many of the responsibilities will fall upon the Retention Coordinator since retention services are based out of the retention office. In addition, some responsibility will also fall on the Director of Student Services, as the director in charge of retention services and retention staff. Faculty also play a key role in retention services, as it is often necessary that students are identified by the faculty and referred to the retention office for assistance. Very few students self-identify and seek out services offered in the retention office on their own. In Spring 2014, 75% of students were referred by a faculty member while only 25% of students sought services on their own.

Project Implications and Social Change

College Implications

The implications of this program evaluation for the Midwestern college are to continue to develop resources for at-risk students. In addition, while meeting the needs of at-risk students, the needs of all students attending this college can be met. Retention services and the retention office have grown since the grant was received in 2011. Part of the growth is due to recognition of a retention office on campus. Initially, the retention services were developed for students who received grant funding due to an at-risk status. However, opening these services to the greater student population as well as word of mouth has expanded the use of the retention office. In addition, due to the growth in the use of retention services, additional services have been added based on data collection by the retention coordinator to better serve all students. As more students use the retention office and the services offered, continued assistance for struggling students may impact the retention, graduation, and job placement rates of the college.

Community Implications

The big impact on this community is the perceptions of those who are underrepresented in the nursing profession. The grant dollars were partially spent on stipends or scholarships for at-risk students, and many of the at-risk students were underrepresented minorities in the community. As the students benefit from the grant dollars and the retention services offered, they may tell other students about the services they have used. Word of mouth will indicate to their peers that this college is supportive of at-risk students. In addition, as underrepresented students graduate and begin taking

their place in the workforce, there will be more underrepresented nurses as role models for future students. As the students succeed in their nursing degree and in their careers, recruitment is done for the college. Removing retention services at this point would be counterproductive.

Far-Reaching Implications

Although the nursing shortage does not have a great impact on this community, research has shown that a shortage of nurses will be nation-wide in the next decade (Culver Clark & Allison-Jones, 2011). While many of the graduates stay within the community, nursing graduates from this college are recruited nationally. As the students graduate from this college, they are asked to remember their roots, and to serve in the future as a preceptor or clinical instructor for student nurses as they get comfortable in their career. The request is not to necessarily serve in this capacity at the Midwestern college, but to serve where they practice. As is true for all students, underrepresented students benefit from working with nurses are from the same minority group are the same gender. Planting this seed with new graduates also gives them a future mission for their profession and plays a role in retention of the future students in nursing.

<div align="center">

Conclusion

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This program evaluation integrated three types of data: archival data from the Midwestern college's academic database, data from a survey of student perceptions, and data from an interview with a key informant in the community. Using three types of data to review retention services allowed for an in depth evaluation of how retention services are delivered, whether they increased student's success, how students perceived the

services offered, and how the community perceived the Midwestern college's

commitment to the community. This evaluation will assist the Midwestern college make

data driven decisions regarding future retention programs and will encourage additional

evaluations of the retention program for nursing students. This program evaluation

revealed some important findings about the retention program that would not have been

learned if an evaluation had not taken place. Continued evaluation of retention services

is recommended and upon completion of this project study, I have further investment in

the evaluation process at this institution. Finally, Section 4 will include the strengths,

limitations, and my reflections of this program evaluation as well as suggestions for

additional research on this topic and the importance of the study to the Midwestern

college.

Section 4: Reflections and Conclusions

Introduction

This evaluation report was completed in an attempt to remedy the lack of an evaluation on a new retention program that was implemented as part of a grant. The rationale for conducting this program evaluation went beyond the lack of an evaluation in the past; I also sought to gather information that would be helpful in making decisions regarding the continuation or addition of retention services. The strengths and limitations of this program evaluation added to my personal growth throughout this project study, as did the discovery of other possibilities for evaluation of retention services. Finally, reflecting on this process in its entirety allowed me to understand how social change is created.

Project Strengths

The first strength of this program evaluation was that it served to remedy the problem that an evaluation of retention services had not been conducted since the receipt of grant dollars that helped form the services. This evaluation was conducted to determine whether the services developed under the grant were assisting at-risk students as the grant intended. Without an evaluation of the services, it could not be determined with certainty whether the grant-funded activities were retaining at-risk students.

One of the greatest strengths of this program evaluation was the evaluation of many different types of data. A formative evaluation was conducted because the evaluation was done while retention services were offered to students receiving stipends or scholarships for their participation. The retention services are still offered at this time,

even though many of the students who have received the grant have graduated. The

evaluation included using archival data, such as GPAs, course completion rates, and

instances of probation or dismissal. In addition, the evaluation involved a review of the

perceptions of the students who received retention services, which brought another

dimension to the evaluation. By completing a survey, the students rated the services

provided and provided answers to open-ended questions that are valuable data to review

when making further decisions for the continuation or addition of retention services.

Finally, an interview was conducted with a community member who had

knowledge regarding the Midwestern college and students who are in attendance. Again,

this additional resource brought yet another dimension to the evaluation by including

qualitative data. The insights from the community member are useful in that they

represent another perspective on retention services.

Weaknesses and Limitations

One of the weaknesses identified in the program evaluation was the limited

participant pool and the low number of responses to the survey that was sent to students

who had received retention services. As discussed earlier in this doctoral study, both

numbers were not adequate according to what was recommended using G Power software

calculations. The survey response rate was low due to timing resulting from the survey

approval date. By the time the survey was approved, many of the students who had

received retention services had graduated. There might have been a higher return rate if

the students had still been enrolled at the institution. As the retention services continue at

the Midwestern college, the pool of participants will increase and the surveys can be sent

to the at-risk students prior to their graduation from the college, thus increasing the response rate.

Another limitation is the possibility that students who were labeled *at-risk* were able to overcome this definition without retention services and may have skewed the results. In addition, it was also possible that because this program evaluation was conducted at the Midwestern College at which I am employed, I had insight into the possible outcomes of this evaluation and might not have been able to be as objective as an external evaluator would have been. However, an external evaluator also has challenges. External evaluators might have had difficulties establishing trust at the institution, and the stakeholders in the program might have felt as though an external evaluator did not have enough knowledge about the setting to understand the program to make a valuable evaluation (Creswell, 2012).

A weakness identified in this program evaluation was the focus only on students who were classified as *at-risk* by the grant definitions. It is possible that a student was at risk for failure due to factors that were not listed by the grant. Additional data could be collected in the future from all students who used retention services to determine whether all students benefit from retention services and the retention office.

Alternative Solutions

While reviewing the literature, I read multiple studies that included tactics for at-risk students that were not used in the retention services at the Midwestern college (Domina, 2009; Haggerty, Holloway & Wilson, 2013; Igbo et al., 2011; Morris & Hancock, 2013; Moses et al., 2011). While many of the different services overlapped in

one way or another, each having a type of retention tactic, none were exactly the same.
As this evaluation was conducted, there were themes that emerged that were included in
the recommendations of this paper to be used in the future. Many retention services
include peer tutoring or peer mentoring as part of their retention efforts, which is not
currently done at the Midwestern college. In addition, there were a variety of definitions
of what determined a student being labeled *at-risk* in the literature. Both the definition of
at-risk and the population studied in the literature had an impact on what solutions were
attempted by those researchers. Further review of the groups of students at the
Midwestern college might also alter the definition of *at-risk* and provide alternative
solutions.

Scholarship

As the true problem addressed in this doctoral study was the lack of a program
evaluation of retention services at the Midwestern college, conducting a thorough
literature review about program evaluations was necessary to understand what evaluating
a program meant. While literature and tactics in retention change over time, it was
important that current literature be predominant while also tracing back the ideas of
retention of students to its beginning research.

The literature review included the use of many databases, including ERIC,
MEDLINE, CINAHL, Nursing & Allied Health Source, Health and Medical Complete,
PubMed, Academic Search Complete, PsycARTICLES, and PsycINFO. I relied on these
databases a great deal while seeking literature about specific topics throughout the
program evaluation. As the Midwestern college offers majors only in the health

professions, I was able to find a great deal of literature in the health databases. I was also able to use educational databases such as Academic Search Complete and ERIC because the problem being addressed was educational in nature. These databases offered a great deal of literature that I used to develop a rich review of literature for program evaluation and retaining students.

While reviewing the literature, I was surprised to find that much of the literature was focused on health professions. As the Midwestern college includes only programs in the health professions, much of the literature was very relevant. In contrast, I was also surprised that there was very little literature focused on nonhealth professions. I found very little, if any, literature focused on how to retain history students or education majors. Mathematics and science students were addressed, but not at the depth of health professions. With so much focus on health professions, I was able to piece together the final project by reviewing several program reports of other health science programs and using those most relevant to the Midwestern college. Although the final program report does not look identical to others reviewed in the literature, it is most meaningful to the Midwestern college, as it was developed based on that culture.

Project Development and Evaluation

As mentioned above, the problem addressed in this doctoral study was the lack of a program evaluation for retention services. In going through this process, I have learned about the different types of program evaluations and how to determine the best type of evaluation for a specific program. Using the six steps identified by Berk and Rossi (1999) introduced in Section 1, I started at Step 4, improving the program, as Steps 1

through 3had already been completed. Step 1 was identification of issues, Step 2 was

formulating policy responses, and Step 3 was designing a program (Berk & Rossi, 1999).

In improving the program, potential changes must first be determined. However,

understanding whether a program is effective may be difficult because there are other,

nonprogram factors in the students' lives that may also be the reason for the impact (Berk

& Rossi, 1999).

I discovered during the review of the literature that the primary reason for

conducting a program evaluation is accreditation requirements or funding requirements,

such as those related to grant funding or to other educational groups (Frye & Hemmer,

2012). However, more recently, educators have become more interested in the process of

evaluation due to the changing approaches to educating students. In order to learn about

the dynamic education system, educators must first understand the new approaches to

education, and program evaluations are becoming more common in all aspects of

learning (Frye & Hemmer, 2012). This in-depth exploration of the literature has paved

the way for the development of the evaluation tools and the program report that will be

submitted to the Midwestern college. It is clear to me that evaluation is ongoing. No

report is final; rather, a report is the beginning of the next evaluation.

Leadership and Change

One of my greatest personal accomplishments from this process is that I feel that I

am able to use evaluation throughout a nonacademic department in an institution of

higher education. I am employed in student services at the Midwestern college, where a

variety of services are offered to students that are not necessarily academic in nature, but

rather function as support systems so that students are able to focus on their academics. The support offered to students is not curriculum based; student services staff do not use syllabi and rubrics or evaluate services as regularly as the academic departments do. I feel that as the leader of this department, I am now able to develop evaluations for many of the services offered so that change can occur as the needs of the students change.

As evaluations are developed throughout the student services department, the basis for change will become clear. Data-driven decisions can be made that will impact future semesters. As evaluations are conducted, some of the focus and priorities in the department will also change. As a culture focused on evaluation is developed, the data collection and evaluations will seem more natural, and the student services staff will also rely on data to move forward with other services beyond retention. During this doctoral study, a rubric for use in the holistic admissions process was developed. Starting in the spring of 2015, an evaluation process on this admissions rubric will take place. After the process is evaluated, staff will be encouraged to present the findings of the evaluation at conferences so that success stories, challenges, and lessons learned can be shared with other institutions. This will further impact social change through relaying information to like institutions that do work similar to ours.

Additional social change may occur as retention services are able to retain students who might not have been retained without these services. As addressed in Section 1, there is a nursing shortage in the United States that creates urgency to educate future nurses to fill the gaps that appear in staffing, most often in hospitals and long-term care facilities (Cameron et al, 2011).

Reflection on the Importance of the Work

As I reflect on the program evaluation, I feel that I must comment on the process, definitions of *at-risk* and *success*, and how the importance of retention services goes well beyond staffing. The process of developing the program evaluation included reviewing literature on many other program evaluations and designing an evaluation that best fit with the culture of the Midwestern college. As there were many different types of evaluations reviewed, piecing together the ideal type of program evaluation for the Midwestern college was done very intentionally.

Although *at-risk* and *success* were largely defined by the grant received, as data collection occurred it became clear that their definitions could be altered. As retention services are reviewed in the future, it is likely that those definitions will evolve. Given that the term *at-risk* was broadly defined per the grant, there were some students who met only one criterion to be labeled *at-risk* whereas other students met all criteria. I can see that it would be possible to further define at-risk students and put them in levels, such as *very at-risk* or *somewhat at-risk*. I can also see that the definition of success may be further refined to include levels. While success may ultimately mean that a student is retained in the nursing program, this may not speak to the student's future success in higher level semesters or success on NCLEX.

Finally, through the progression of this program evaluation, I can see the importance of the success of students in nursing programs. Beyond the importance of having well-prepared nurses in the community lies the passion of the students who enter the nursing field. In very few professions is there a self-proclaimed calling to do the

work. Nursing students can often pinpoint a time in their lives when they knew that they wanted to be nurses. The students I have worked with describe this moment with great passion. The need for retention services to be available to at-risk students is not limited to staffing hospitals; such services are important in helping these passion-filled students achieve their dream of becoming a nurse.

Implications, Applications, and Directions for Future Research

As I collected data and reviewed the analysis, I developed a better understanding of the reasons for the program evaluation. Ideas began to flow about how to use what I had learned, and possibilities for future research at the Midwestern college came into view. As discussed above, the implications for the students who are assisted with retention services are two-fold. Not only does the workforce need well-trained nurses, but the students who are assisted due to the receipt of retention services may experience a new level of success themselves. In addition, the impact of failure on all students, including those who are at risk, can be devastating. Using retention services as a basis for support for students is one positive implication of retention services.

The data analysis was described in an evaluation report for the stakeholders at the Midwestern college. In order to apply the results, the evaluation report was used to compare the specific successes of the students who received the retention services to those who did not receive the retention services. Although the results of the archival data were not statistically significant, the stakeholders will be able to view the actual data to determine whether results are moving in the right direction. In addition, the results of the survey showed that the recipients of retention services viewed them positively and

believed that they had an impact on their success. Finally, the data from the interview

indicate that members of the community view the Midwestern college positively and that

the use of retention services has an impact on the nursing students.

During data collection and analysis, I was already forming ideas for additional

evaluations that can take place at the Midwestern college. As discussed earlier, the

definitions of *at-risk* and *success* are quite broad, and retention services may have a

greater impact on students who meet multiple at-risk criteria. In addition, the definition

of success may need to be adjusted, as success may mean short-term success (passing a

course) or long-term success (passing NCLEX). Future evaluation of retention services

may also include a review of all students who use the services voluntarily compared to

those who are directed to use the services. It would also be interesting to review the

evaluation report with the stakeholders of the Midwestern college to determine what

types of services should remain, what services should be added, and what services should

be discontinued.

Conclusions

Throughout this doctoral study, from the beginning of the proposal to the actual

evaluation data to the evaluation report, important discussions occurred at the

Midwestern college related to retention services. This dialogue has emerged into many

facets of the college's departments, including the targeted at-risk students in the nursing

program for which this evaluation was conducted, to expansion of retention services to

the master and doctoral levels and how to evaluate nonacademic services and programs.

These discussions have been inclusive across the two schools at the Midwestern college,

which has also created solidarity in the subject of retention. The combination of

quantitative and qualitative data has allowed for a depth in the research that can be

appreciated and appeal to different types of individuals. The evaluation report includes

visual representations of the data as well as description of the process used to determine

the type of evaluation conducted, the tools used in the evaluation, and the findings.

Educators are committed to continuous improvement through data collection and analysis

and evaluating results by using a circular process to embrace constant change.

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Appendix A: Evaluation Findings and Recommendations

Purpose of Evaluation

As there continues to be a nursing shortage and a lack of diversity in the nursing profession, it is important to retain at-risk students who have been admitted to nursing programs. The purpose of this program evaluation was to compare at-risk students who had not received retention services to at-risk students who had received retention services at a Midwestern college. This project study evaluated the retention services provided at a Midwestern college to students defined as at-risk. A formative evaluation was conducted using information from three sources; the college, the students, and the community. This evaluation report format is adapted from an evaluation report by Haji, Morin, and Parker (2013), who described using the evaluation to achieve the stated goals. This format then included going beyond the stated goals by creating a holistic evaluation report that encompasses a combination of methods and models to meet the needs of the organization. The Midwestern College received a grant in 2011 to provide retention services for students who are educationally or economically disadvantaged. The results of the formative evaluation may assist in informing the grant administrators during the final year of funding by the grant as the college continues the services without grant funding.

At this small college of nursing and health sciences in the Midwest, creating a diverse student body is part of the institutional mission. To become more diversified, grant funding was sought in order to develop retention programs that would assist nursing students who come with disadvantages that may put them at-risk. The Nursing Workforce Diversity Scholars (NWD Scholars) retention programs were created in 2011

and funded by a grant. Once grant funding had been secured and students had been admitted, and funded through grant dollars, an evaluation of the program was needed to determine whether the services introduced were having an effect on the identified at-risk students.

Research Questions

In order to determine if retention services are beneficial to at-risk students, six research questions were developed.

1. Did at-risk students who received retention services have a significantly higher percentage of passed courses than at-risk students who did not receive retention services?

2. Did identified at-risk students who received retention services have a significantly higher semester and cumulative GPAs than at-risk students who did not receive retention services?

3. Were there significantly fewer identified at-risk students who received retention services on probation compared to identified at-risk students who did not receive retention services?

4. Were identified at-risk students who received retention services dismissed significantly less often than at-risk students who did not receive retention services?

5. How did students rate their retention services on the Survey of Student Perception of Support Services, Persistence, and Belongingness?

6. What perceptions were offered by the key informant regarding how the Midwestern college supports students toward degree completion? An analysis was conducted to determine if at-risk nursing students who received retention services were more

successful than at-risk nursing students who did not receive retention services based on course completion rates, GPAs, and instances of probation and dismissal. Retention services have been ongoing and increasing in nature at the local institution over the last 5 years, but they had not yet been evaluated. In addition, the success of the retention services implemented had not been reviewed to determine whether the implementation of these services have made an impact on the success of at-risk students on this campus.

Population and Sample

I have conducted a formative program evaluation which included reviewing retrospective data of at-risk students, collecting information from current at-risk students who received retention services regarding their perceptions on the effectiveness of the retention services on their success, and interviewing a key informant regarding the perceptions of the community about the local college. A mixed methods approach was used to combine both quantitative and qualitative data collection in a concurrent strategy. Creswell (2012) described concurrent data collection in mixed methods research as collecting data using the qualitative and quantitative methods simultaneously to bring together to better understand the research problem. The three types of data were collected for this evaluation in order to produce a rich understanding of the benefits of retention services based on quantifiable data, perceptions of the students using the retention services, and perceptions of the community.

A student may be at-risk for economical or educational reasons. Economically disadvantaged students are identified as coming from a family with an annual income that does not exceed 200% of the U.S Census Bureau's adjusted annual income (Nursing

Workforce Development Guidelines, 2010). Educationally disadvantaged students are

identified by coming from a high school with a lower ACT/SAT average than the state

test results, coming from a high school where 50% or fewer graduates attend college,

having a diagnosed physical or mental impairment that limits participation in educational

experiences, being a person for whom English is not the primary language and language

is a barrier for academic performance, being a person who is a first-generation college

student and/or a coming from a high school where at least 30% of enrolled students were

eligible for free or reduced-price lunch (Nursing Workforce Development Guidelines,

2010).

The entire population included all prelicensure students, but this study focused on

only at-risk students enrolled in a prelicensure program between Fall 2010 and Spring

2013. This resulted in a sample size of 72 prelicensure nursing students. Fifty-four

students had access to retention services available after the receipt of grant funding, while

18 students were in their first two semesters of the prelicensure nursing program prior to

the receipt of the nursing grant.

All students who met the at-risk criteria were included in the study, including all

full-time and part-time students. Students enrolled in the nursing program at this college

are enrolled as a cohort, so all students take the same courses throughout the nursing

curriculum. All pre-requisite nonnursing courses are completed prior to taking any

nursing courses. It is possible that students may take nonnursing elective courses during

the semester. Nonnursing elective courses will not be taken into consideration for this

research.

Data Collection

In order to capture data regarding retention services from the three stakeholders, the college, the students, and the community - three types of data were collected. First, secondary data were collected based on student's course completion rates, GPAs, and receipt of probation and/or dismissal letters. These data make up the retrospective aspect of the research design, as the data existed already in the college's database, and I reorganized the data for the purpose of this research. A survey was distributed to students who had received retention services to determine their perceptions of the services and how they viewed them as aiding their success in the nursing program. In addition, the opinions of a community member were recorded to get an informants' view of how the community views the local college in relation to filling a need in health care.

A program evaluation from the perspective of the college used a quasi-experimental design using retrospective data. This method was used to evaluate Research Questions 1 through 4, which are related to student GPAs, course completion rates, and receipt of probation or suspension letters. As the at-risk students were grouped as determined by the retention services available, random assignment was not possible (Creswell, 2012). All students were enrolled for at least two semesters in a prelicensure program between Fall 2010 and Spring 2013. The students were followed for two semesters. GPAs were collected before entry into the nursing program and after the first and second semester of enrollment. Course completion rates and receipt of probation and/or dismissal letters were collected for both Semester 1 and Semester 2.

The dependent variables that were measured included course completion, semester and cumulative GPAs, and the receipt of a letter of probation or a letter of dismissal. Table A1 identifies the variable, and explains how it was measured and when it was measured.

Table A1

Study Variables for Archival Academic Data

Variable	Type of variable	How is it measured?	When is it measured?
Course completion	ratio	Percentage. Number of courses completed divided by the total number of courses.	At the conclusion of semester one and at the conclusion of semester two.
Admission GPA	ratio	Cumulative GPA upon admission.	Prior to taking courses at Midwestern college.
Semester One GPA	ratio	Semester GPA using only semester one nursing courses.	At the conclusion of semester one.
Semester Two GPA	ratio	Semester GPA using only semester two nursing courses.	At the conclusion of semester two.
Cumulative GPA at conclusion of Semester Two	ratio	Cumulative GPA using semesters one and two nursing courses.	At the conclusion of semester two.
Receipt of letter of probation	nominal	Review of academic file to determine if student was placed on probation during semester one or two.	At the conclusion of semester two.
Dismissal	nominal	Review of academic file to determine if student was dismissed during semester one or two.	At the conclusion of semester two.

Evaluation Outcomes

The gender and age of the participants were included for descriptive purposes. Eighteen at-risk students were included in the group that did not receive retention services. This included 17 females (94%) and one male (6%), and their average age was 28.0 years. Fifty-four at-risk students were included in the group that received retention services. This included 39 females (72%) and fifteen males (28%) and their average age was 29.94 years.

In the first research question, an independent samples *t* test was done to determine if the percentage of courses completed was significantly different between the at-risk students who received retention services and the at-risk students who did not receive retention services. While the at-risk students who received retention services did have a higher percentage of passed courses when compared to at-risk students who did not receive retention services, the results were not significant. Ninety-seven percent of courses were completed by students who received retention services, while ninety-four percent of courses were completed by students who did not receive retention services, as indicated in Figure A1.
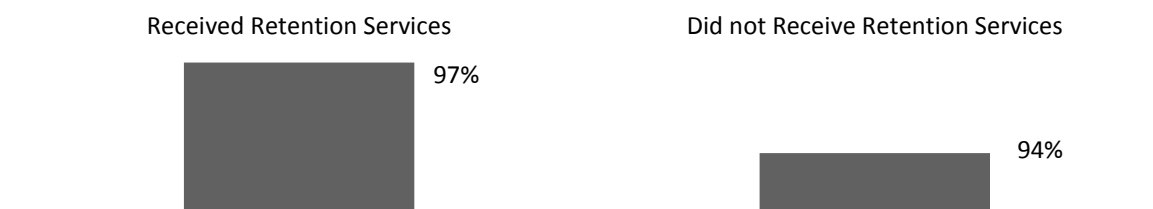
Received Retention Services   Did not Receive Retention Services

97%

94%

Figure A1. Average percentage of courses completed

For the second research question, a repeated-measures ANOVA test was used to

determine whether there was a significant difference in the means of GPAs over time

between at-risk students who had received retention services and at-risk students who had

not received retention services. Most GPA check points did indicate that at-risk students

who received retention services had a higher GPA than at-risk students who did not

receive retention services, but again, the difference was not statistically significant (See
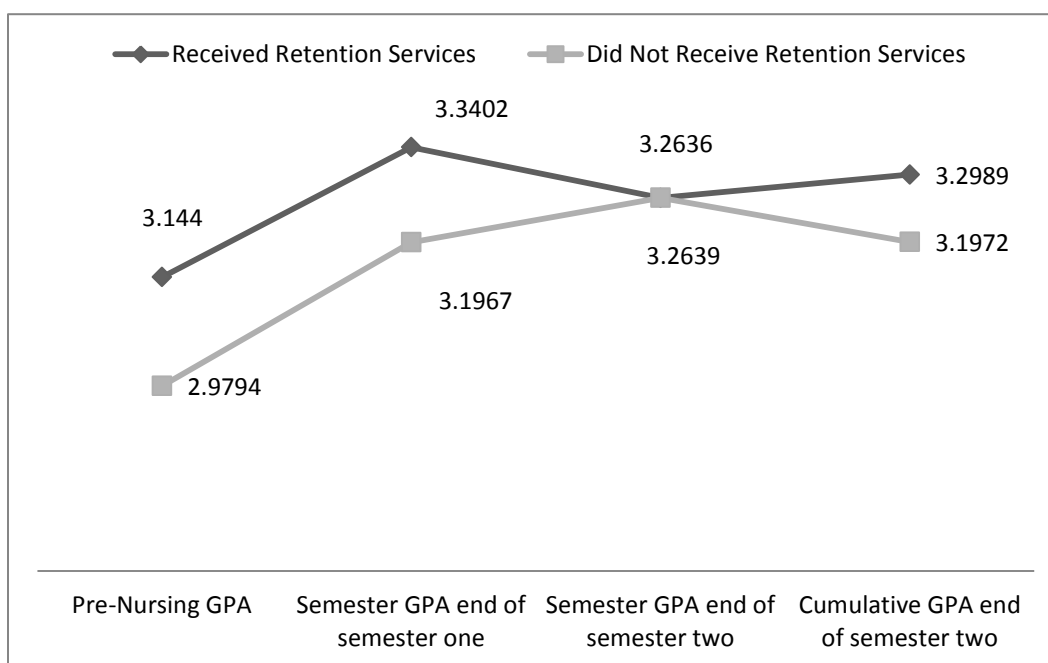
Figure A2).

Figure A2. Difference in GPAs between groups

The chi-square test was done in Research Question 3 to determine whether at-risk students who received retention services were on probation less often than students who did not receive retention services. Of the 54 students who received retention services, 50 students were not on probation and four students were on probation. Of the 18 students who did not receive retention services, 14 students were not on probation and four students were on probation. While students who received retention services were on probation less than students who did not receive retention services, the difference was not statistically significant. Seven percent of students who received retention services were on probation, while 22 percent of students who did not receive retention services were on

probation. Figure A3 illustrates the percentage of students who were on probation by
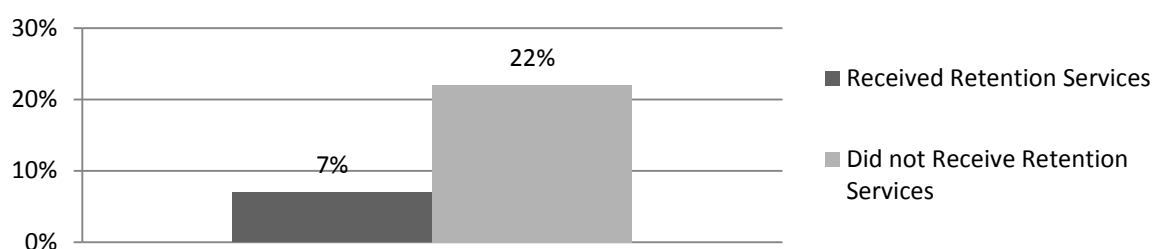
group.

Figure A3. Percent of students on probation

       The chi-square test was done in Research Question 4 to determine whether at-risk

students who received retention services were dismissed less often than students who did

not receive retention services. Of the 54 students who received retention services, two

students (4%) were dismissed. Of the 18 students who did not receive retention services,

1 student (6%) was dismissed. While the students who received retention services were

dismissed less than students who did not receive retention services, the difference was not

statistically significant. Figure A4 illustrates the percent of students who were dismissed

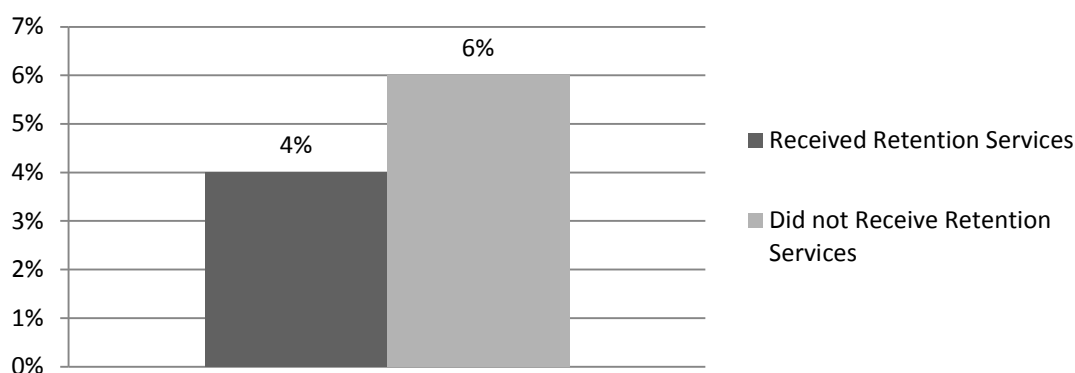during semesters one and two by group.

Figure A4. Percent of students dismissed

Student responses to this survey reported below address Research Question 5. Of the 54 students who were eligible to take the survey, 48 of them had valid email addresses on file. Twenty-two students responded to the survey, including 15 females, and 6 males. One respondent did not answer this question. The results of the survey are shown in table A2. Although all but two questions received scores between 4.0 and 5.0, which correlates to "*agree"* and *"strongly agree,'* the highest score received in the survey (4.27) was in answer to the question "I feel comfortable seeing the NWD advisor about my academic progress and coursework." The two questions that did not receive a mean score of at least 4.0 included "I intend to return to the Midwestern College next semester" and "I believe my experience using the services (tutoring, retention seminars, NWD advisor, and retention coordinator) have influenced my decision to return to the college next semester." As will be discussed in the limitations section, these questions no longer had the same relevance because most of the at-risk students who received retention services had already graduated from the Midwestern College. Therefore, their

intent to return to the college was likely due to graduation, not because of academic

issues.

Table A2

Summary Survey of Student Perception of Support Services, Persistence, and Belongingness, N= 23

Survey Question	Mean	Std. Deviation
I feel comfortable seeing the NWD advisor about my academic progress and coursework.	4.2727	0.91363
I believe the support services mentioned above (tutoring, retention seminars, NWD advisor, and retention coordinator) are important to my academic progress.	4.2273	0.73434
I believe offering these support services demonstrates that my college supports me.	4.2273	0.9011
I feel comfortable meeting with the retention coordinator.	4.1818	0.98333
I feel comfortable using tutoring services and retention seminars to assist me in my coursework.	4.1818	0.88607
Meeting with the retention coordinator is helpful.	4.1429	0.98974
Tutoring/retention seminars are helpful.	4.0909	0.79253
I believe using these services (tutoring, retention seminars, NWD advisor, and retention coordinator) have already helped me achieve academic success.	4.0900	0.733
Meeting with the NWD advisor is helpful.	4.0000	0.95346
I intend to return to the Midwestern College next semester.	3.5909	1.55678
I believe my experience using the services (tutoring, retention seminars, NWD advisor, and retention coordinator) have influenced my decision to return to the college next semester.	3.4091	1.26703

Several themes emerged from the interview notes. The most common themes

included student/personal responsibility, family responsibility, and community

responsibility. The interviewee discussed the importance of those three types of

responsibilities and how their alignment is essential to the success of at-risk students.

Figure A5. Retention based on shared responsibility

Student/personal responsibility was the theme that emerged most frequently during the interview. "If you think the student is not successful, you wonder, did they have a realistic grasp of what is entailed in completing the program of study? Did they give it their all? Did they use resources?" The interviewee discussed the personal characteristics of students he knows, and described their most powerful characteristic as persistence. "They came in with a high intelligence level to allow adaptation into the profession." The interviewee also indicated it is important for students, regardless of what profession he or she might pursue, to learn how to take personal responsibility for what is important to them.

Family responsibility was a second major theme that emerged from the interview. "We want the babies (children) to have a fighting chance, then we will focus on the structural constraints later, but it starts in the home and in the community." The theme of family responsibility went hand in hand with both personal responsibility, and

community responsibility. In fact, the three themes, personal responsibility, family responsibility, and community responsibility need to connect in order for our young people to be successful.

The final major theme from the interview was community responsibility. While the focus of this theme included the Midwestern College's commitment to the community, there were also suggestions on how families and communities need to work together. The interviewee suggested that academic preparation needs to happen very early. "Head Start programs are the current start, but we need more of them. Not all parents read to their children. We need to transfer our social values to our children and plant the seed of desire for our children to succeed."

In addition, the interviewee discussed the role of the Midwestern College in supporting students academically as well as socially. While the interviewee believes that the college is improving in its relationships with at-risk students, there is room for improvement. Since the Midwestern College is community oriented, it has an obligation to continue its outreach to the community it serves.

While the results discussed in research questions 1 through 4 were not statistically significant, they do indicate that retention services are assisting at-risk students in movement towards success. However, the information that was obtained from the survey and the community member includes information that will allow the retention services offered to move forward for future students at the Midwestern College.

Weaknesses and Limitations

One weakness of this program evaluation included the broad definition of educationally or economically at-risk students. It is possible that there were students who fit into the definition of educationally or economically at-risk, but have performed exceptionally despite their circumstances. These participants may have impacted the outcomes of this study by making the results of retention services appear to have a positive effect on at-risk students when they may not have. In addition, although all identified at-risk students are required to participate in the same retention services, it is likely that some did not take away the intended value that other participants took away from the services.

Another weakness is the low response rate from the survey sent to at-risk students who had received retention services. Since many students who had received retention services had already graduated from the Midwestern College, some of the email addresses were invalid. Although phone calls were made to potential participants with invalid email addresses, only two of the eight potential participants returned phone calls or provided a valid email address.

Finally, the sample size was not adequate. Using G Power 3.1 software, the adequate sample size was calculated. Based on a .03 effect size, and power at .90, the sample size should be 117. The sample size used in this doctoral study is 72, which is not adequate.

Recommendations

In the evaluator role during this program evaluation, several recommendations were identified. Included are recommendations for pre-college programming, and the

continuation of retention services. In addition, there is a recommendation for an added service that may increase retention as well as updates to how and when retention data are collected from students and how "at-risk" students are defined.

The first recommendation is the continuation of nurse camp for at-risk high school students in this community. This program has been a great opportunity to bring high school students from diverse backgrounds to campus and immerse them in the nursing profession for six weeks. This program also provides instruction in math and science skills so the students can excel in future classes that are essential for high school success and entry to college. The students who attend nurse camp are given a stipend, which is a key for initial enrollment in the program. Although nurse camp is free for attendees, the stipend is offered to students so they do not feel they need to choose between attending nurse camp and working during the summer months.

An additional recommendation involving nurse camp is to have reunions annually to reconnect the students with one another and with the campus. An attempt to keep these potential nurses connected may help motivate the students to stay on track for high school success and to continue in college-bound high school classes. Mentoring these students after they have graduated from nurse camp may also encourage them to take courses at community colleges while a high school student. Nurse camp advisors could assist these students with the process on enrolling in college-level courses during their junior and senior years in high school.

Since the timing of when surveys were collected from students was not ideal, it is recommended to add questions regarding student perceptions of retention services to the

exit interview that is conducted by the department dean. Changing the timing of the data collection may result in a higher return rate, therefore including the perceptions of more students.

The definitions used for "at-risk" students and "success" were very broad in this doctoral study. It is recommended that more specific definitions be used, and students be classified in levels, such as "very at-risk" and "somewhat at-risk" and that the levels of success also be broadened to include "passed class," "graduated" and "passed NCLEX-RN." This may assist in determining future retention services for students who come to the Midwestern College with multiple "at-risk" identifiers when compared with students who have only one or two identifiers.

Although the results of archival data did not indicate there is a statistically significant difference between at-risk students who received retention services and at-risk students who did not have access to those services, the survey results indicated a positive view of the services offered and of the college for offering services. Retention services have expanded since its inception, and should continue to do so based on the needs of the students. It is recommended that an evaluation of archival data continue each year. In addition, conducting a survey of the students who received retention services is also recommended to ensure the services offered are used and that students feel positively about the services.

An additional recommendation is to add an advising or mentoring component to retention services. Students who have received the grant dollars have been assigned to the same advisor. As the students move beyond semesters one and two in the nursing

program, the addition of peer advising or mentoring may also benefit retention rates of this group of students. This addition will take resources, as the advising or mentoring will need to be developed, advisors or mentors will need to be trained, and someone will need to monitor the program. This could include additional staff needs in the office of retention services.

Finally, including retention services in orientation activities may promote the services to students who may not otherwise take advantage of them. Asking students to identify what helps them succeed academically and connecting those successes to the services offered in the retention office may help the students understand the purpose of the retention office. The word "retention" sometimes creates a negative connotation. Renaming the office may also help with a more positive view of the services offered.

Conclusion

This research was conducted to determine whether there is a difference between at-risk students who have received retention services and at-risk students who did not receive retention services. To investigate this question, a formative program evaluation was done to determine the differences between the two groups of students in GPA, course completion rate, and instances of probation and dismissal. The design was a retrospective quasi-experimental study, which included data from the Midwestern College's database. Using the data collected, the researcher determined whether a significant difference existed using *t*-tests, repeated measures ANOVA, and chi-squared. In addition, the students who had received retention services were surveyed to determine if they perceived that the retention services helped them succeed in the nursing program.

Finally, a member of the community was interviewed to get a viewpoint on the
contribution the Midwestern College is making to health care in the community.

As part of the doctoral study project, results were compared with the outcomes of
a grant received by the Midwestern College to determine whether the outcomes are being
met. The results comparison with the grant outcomes were reported to the stakeholders
of the Midwestern College in a white paper format. The stakeholders can use this
information to determine the future of the retention services offered.

A Formative
Evaluation of
Retention Services

A Summary of Findings and Recommendations for
Midwestern College Use
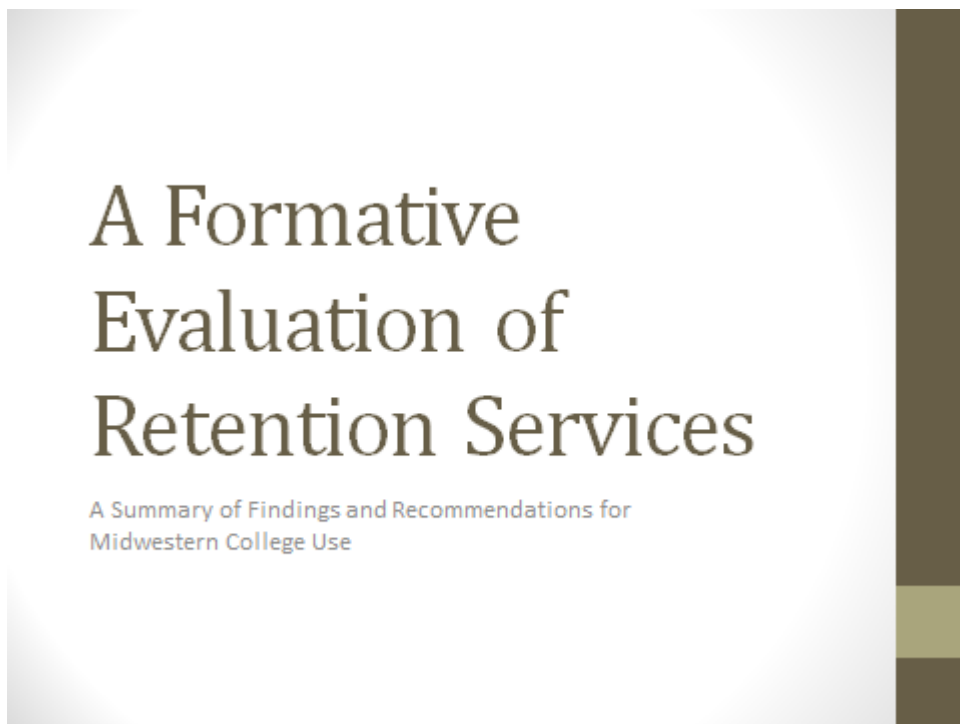
Purpose of this Evaluation

- The purpose of this program evaluation was to compare at-risk students who have not received retention services to at-risk students who have received retention services at a mid-western college.
- This project study evaluated the retention services provided at a Midwestern college to students defined as at-risk.
- A formative evaluation was used to collect data from three sources; the college, the students and the community.

Research Questions

- 1. Do at-risk students who receive retention services have a significantly higher percentage of passed courses than at-risk students who do not receive retention services?

- 2. Do identified at-risk students who receive retention services have a significantly higher semester and cumulative GPAs than at-risk students who do not receive retention services?

- 3. Are identified at-risk students who receive retention services on probation significantly less than identified at-risk students who do not receive retention services?

Research Questions

- 4. Are identified at-risk students who receive retention services dismissed significantly less than at-risk students who have not received retention services?

- 5. How do students rate their retentions services on the Survey of Student Perception of Support Services, Persistence and Belongingness?

- 6. What perceptions are offered by the key informant regarding how the Midwestern College supports students towards degree completion?

Population and Sample

- Seventy-two at-risk pre-licensure nursing students

- Fifty-four pre-licensure students received retention services

- Eighteen pre-licensure students did not receive retention services
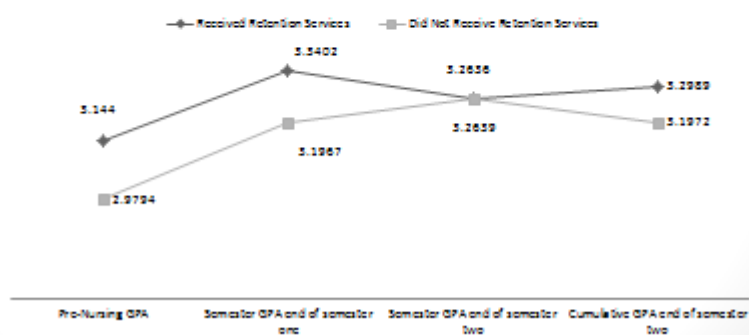
Research Question 1

- Do at-risk students who receive retention services have a significantly higher percentage of passed courses than at-risk students who do not receive retention services?

Average Percentage of Courses Completed

■ Average Percentage of Courses Completed
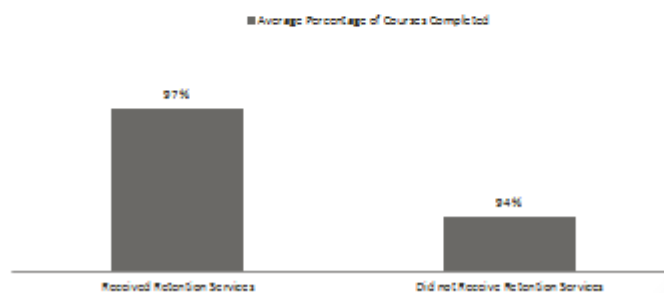
Research Question 2

- Do identified at-risk students who receive retention services have a significantly higher semester GPA than at-risk students who do not receive retention services?
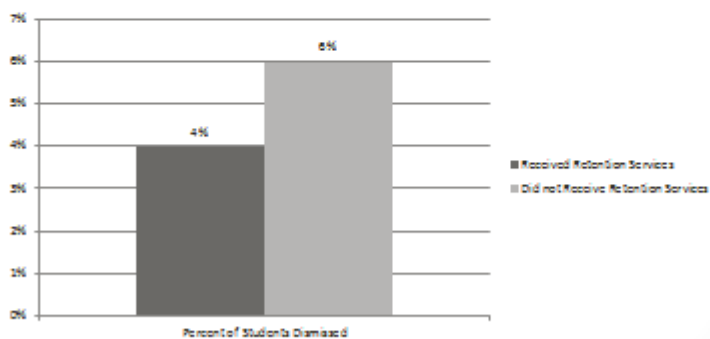
Research Question 3

- Are identified at-risk students who receive retention services on probation significantly less than identified at-risk students who do not receive retention services?
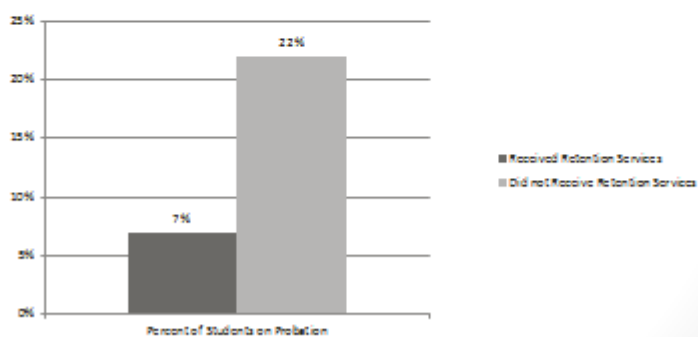
Research Question 4

- Are identified at-risk students who receive retention services dismissed significantly less than at-risk students who have not received retention services?

Research Question 5

- How do students rate their retentions services on the Survey of Student Perception of Support Services, Persistence and Belongingness?

Survey Question	N	Mean	Std. Deviation
I feel comfortable seeing the NWO advisor about my academic progress and coursework.	33	4.2727	0.91808
I believe the support services mentioned above (tutoring, retention seminars, NWO advisor and retention coordinator) are important to my academic progress.	33	4.2273	0.73436
I believe offering these support services communicates that my college supports me.	33	4.2273	0.9011
I feel comfortable meeting with the retention coordinator.	33	4.1818	0.92333
I feel comfortable using tutoring services and retention seminars to assist me in my coursework.	33	4.1818	0.83007
Meeting with the retention coordinator is helpful.	33	4.1429	0.92874
Tutoring/retention seminars are helpful.	33	4.0909	0.79238
I believe using these services (tutoring, retention seminars, NWO advisor and retention coordinator) have already helped me achieve academic success.	33	4.0900	0.733
Meeting with the NWO advisor is helpful.	33	4.0000	0.93840
I intend to return to Allen College next semester.	33	3.2909	1.33073
I believe my experience using the services (tutoring, retention seminars, NWO advisor and retention coordinator) have influenced my decision to return to the college next semester.	33	3.4091	1.33703

Research Question 6

- What perceptions are offered by the key informant regarding how the Midwestern College supports students towards degree completion?

- Three themes:
  1. Student/Personal Responsibility
  2. Family Responsibility
  3. Community Responsibility

Recommendations

1. Continuation of Nurse Camp
2. Nurse Camp Reunions
3. Continue evaluating archival data
4. Continue to survey recipients of retention services
5. Explore additional retention services, including dedicated advising and peer mentoring

Conclusion and Questions

Appendix B: Consent Form for Survey of Student Perception of Support Services,

Persistence and Belongingness

CONSENT FORM

You are invited to take part in a research study of retention services at the Midwestern College. The researcher is inviting NWD Scholars who have received retention services participate in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Joanna Ramsden-Meier, who is a doctoral student at Walden University. Joanna is also the Director of Student Services here at the Midwestern College, but this study is separate from that role.

Background Information:
The purpose of this study is to determine the effect of retention services on the success of NWD scholars.

Procedures:
If you agree to be in this study, you will be asked to take five minutes and respond to the questions on this short survey.

Voluntary Nature of the Study:
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at The Midwestern College will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:
Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as stress or fatigue. Being in this study would not pose risk to your safety or wellbeing.

The benefits of your participation include providing valuable input for future students.

Privacy:
Any information you provide will be kept anonymous. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure on a database on a password protected server accessed only by the researcher. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone at ███████████████████████████ If you want to talk privately about your rights as a participant, you can call the IRB representative. She is the Midwestern College representative who can discuss this with you. Her phone number is ███████████

IRB@MidwesternCollege.edu . The Midwestern College's approval numbers for this study are 14-0121 and 14-0124 and they expire on June 30, 2015.

<u>Please print or save this consent form for your records.</u>
Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By <u>clicking the link below</u>, I understand that I am agreeing to the terms described above.

A three-phased procedure includes notifying students in advance of the survey, sending the survey, and then sending a follow-up to the survey.

Email 1: Subject: Your assistance is requested to evaluate retention services

Message: You will receive a survey via email in the next week. I am asking your assistance in completing a survey to evaluate your perceptions of the retention services offered as part of the NWD scholarship or stipend you have received while attending the Midwestern College. Participation is completely voluntary. Thank you in advance for your assistance!

Doctoral Student at Walden University

Email 2: Subject: Your assistance is requested to evaluate retention services

Message: I am asking your assistance in completing this survey to evaluate your perceptions of the retention services offered as part of the NWD scholarship or stipend you have received while attending the Midwestern College. Participation is completely voluntary. The survey can be accessed here. Thank you in advance for your assistance!
Doctoral Student at Walden University

Email 3: Subject: Your assistance is requested to evaluate retention services

Message: I am sending this email as a reminder to complete a short survey. I am asking your assistance in completing this survey to evaluate your perceptions of the retention services offered as part of the NWD scholarship or stipend you have received while attending The Midwestern College. Participation is completely voluntary. The survey can be accessed here. Thank you in advance for your assistance!
Doctoral Student at Walden University

I will give a reminder either in person or by telephone:
Please remember to complete the survey in your school email inbox to help us evaluate the retention services that are part of the NWD Grant. Thank you!

Appendix C: Survey of Student Perception of Support Services, Persistence, and Belongingness

<u>DISREGARD THIS SURVEY IF YOU ARE UNDER 18 YEARS OF AGE</u>
Circle: Gender: Male   Female
Number of credits completed at the Midwestern College (NOT including current semester) _____
Circle the number that best describes your response to each statement.
1 = Strongly Disagree
2 = Disagree
3 = Neither Agree nor Disagree
4 = Agree
5 = Strongly Agree

1. I feel comfortable using tutoring services and retention seminars to assist me in my coursework.

     1   2   3   4   5

2. Tutoring/retention seminars are helpful.

     1   2   3   4   5

3. I feel comfortable seeing the NWD advisor about my academic progress and coursework.

     1   2   3   4   5

4. Meeting with the NWD advisor is helpful.

     1   2   3   4   5

5. I feel comfortable meeting with the retention coordinator.

     1   2   3   4   5

6. Meeting with the retention coordinator is helpful.

     1   2   3   4   5

7. I believe the support services mentioned above (tutoring, retention seminars, NWD advisor, and retention coordinator) are important to my academic progress.

1   2   3   4   5

8. I believe using these services (tutoring, retention seminars, NWD advisor, and retention coordinator) have already helped me achieve academic success.

1   2   3   4   5

9. I intend to return to the Midwestern College next semester.

1   2   3   4   5

10. I believe my experience using the services (tutoring, retention seminars, NWD advisor, and retention coordinator) have influenced my decision to return to the college next semester.

1   2   3   4   5

11. I believe offering these support services demonstrates that my college supports me.

1   2   3   4   5

12. What tools or resources have you found useful towards your success in your program of study?

13. What tools or resources are available to you, but you have not used?

14. What tools or resources are available to you, but you have not found useful?

15. What recommendations do you have for additional tools or resources that could be used for success in the future?

Appendix D: Permission Agreement to use Survey of Student Perception of Support
Services, Persistence and Belongingness

East Stroudsburg University

Attn: Dr. Virginia Reiner

200 Prospect Street

East Stroudsburg, PA 18301-2999

October 9, 2013

Dear Dr. Virginia Reiner,

As a doctoral student at Walden University in Minneapolis, MN, I have selected a final
project study topic that, after a review of the literature, aligns with the study you
completed in 2012. The topic of student's perceptions of support services, persistence,
and belongingness are of great interest to my local institution as a grant has been received
to evaluate how retention services play a role in persistence of at-risk students. I am
proposing to conduct a program evaluation of our retention services and would like to
include student perceptions as part of this research.

Per our email conversation, I would like the opportunity to further research this issue
based on your study and request your permission to replicate the use of your *Survey of
Student Perception of Support Services, Persistence, and Belongingness.* If you are still
in agreement to this use, please sign the attached permission agreement to be included in
the appendix of my project study.

Thank you for allowing me the opportunity to further research this issue based on your
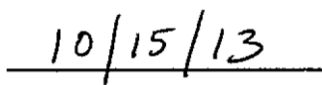study and to further contribute to the field of student persistence.

Sincerely,

Joanna Ramsden-Meier

Permission Agreement

As the copyright holder of *Survey of Student Perception of Support Services, Persistence, and Belongingness* (2012), I, Dr. Virginia Reiner, grant permission for Joanna Ramsden-Meier to replicate the developed survey for the purpose of further research.

Virginia Reiner   _10/15/13_
Dr. Virginia Reiner   Date

Appendix E: Consent Form for Interview

CONSENT FORM

You are invited to take part in a research study of retention services and at-risk students in health care. The researcher is inviting a key informant involved in the community with knowledge of the Midwestern College to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Joanna Ramsden-Meier, who is a doctoral student at Walden University. You may already know the researcher as the Director of Student Services at the Midwestern College, but this study is separate from that role.

Background Information:
The purpose of this study is to determine the effect of retention services on the success of NWD scholars.

Procedures:
If you agree to be in this study, you will be asked to:
- Take approximately one hour of time to have a conversation with the researcher regarding your perceptions of the Midwestern College and its role in the future of health care in this community.

Here is a sample question:
- What types of activities do you see the Midwestern college engaging in to encourage at-risk student success?

Voluntary Nature of the Study:
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at the Midwestern College will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:
Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as fatigue, stress or becoming upset. Being in this study would not pose risk to your safety or wellbeing.

The benefits of your participation include providing valuable input for future students.

Privacy:
Any information you provide will be kept anonymous. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure on a database on a password protected server accessed only by the researcher. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone at ████████████████████████████████████ If you want to talk privately about your rights as a participant, you can call ████████████████████████ ███████████████████████████ the Midwestern College's approval numbers for this study are 14-0121 and 14-0124 and they expire on June 30, 2015.

The researcher will give you a copy of this form to keep.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I understand that I am agreeing to the terms described above.

Only include the signature section below if using paper consent forms.

Printed Name of Participant

_____

Date of consent

_____

Participant's Signature

_____

Researcher's Signature

_____

Appendix F: Interview Guide

1. What are your perceptions of the Midwestern college and their commitment to the community?

2. Where do you think the responsibility lies when a student does not finish their program of study at the Midwestern college?

3. What negative impact do you see when a student does not finish their program of study? (i.e. To the student, the Midwestern college, the community, the profession).

4. How do you think students who finish their program of study are supported while they are at the Midwestern college?

5. How do you think the students who do not complete their program of study are failed by the Midwestern college?

6. What do you think the Midwestern college could do better to support all students?

7. What do you think students could do better to support themselves while attending the Midwestern college?

Appendix G: Study Variables Obtained From College Records

StudentID number	Group R = retention services NR = no retention services	Number of Courses attempted	Number of Courses Completed	Ratio of completed to attempted	Semester GPA end of semester 1	Semester GPA end of semester 2	Cumulative GPA end of semester 2	Probation in semester 1? (Y/N)	Probation in semester 2? (Y/N)	Dismissed in semester 1? (Y/N)	Dismissed in semester 2? (Y/N)
001 (example)	R	4	3	0.75	3.40	3.45	3.41	N	N	N	N
002											