

Fall 2014

# Early Alert Referral Program

Roslana D. Gray  
*Regis University*

Follow this and additional works at: <https://epublications.regis.edu/theses>



Part of the [Medicine and Health Sciences Commons](#)

---

## Recommended Citation

Gray, Roslana D., "Early Alert Referral Program" (2014). *All Regis University Theses*. 186.  
<https://epublications.regis.edu/theses/186>

This Thesis - Open Access is brought to you for free and open access by ePublications at Regis University. It has been accepted for inclusion in All Regis University Theses by an authorized administrator of ePublications at Regis University. For more information, please contact [epublications@regis.edu](mailto:epublications@regis.edu).

**Regis University**  
Rueckert-Hartman College for Health Professions  
Loretto Heights School of Nursing  
**Doctor of Nursing Practice Capstone Project**

# Disclaimer

Use of the materials available in the Regis University Capstone Collection ("Collection") is limited and restricted to those users who agree to comply with the following terms of use. Regis University reserves the right to deny access to the Collection to any person who violates these terms of use or who seeks to or does alter, avoid or supersede the functional conditions, restrictions and limitations of the Collection.

The site may be used only for lawful purposes. The user is solely responsible for knowing and adhering to any and all applicable laws, rules, and regulations relating or pertaining to use of the Collection.

All content in this Collection is owned by and subject to the exclusive control of Regis University and the authors of the materials. It is available only for research purposes and may not be used in violation of copyright laws or for unlawful purposes. The materials may not be downloaded in whole or in part without permission of the copyright holder or as otherwise authorized in the "fair use" standards of the U.S. copyright laws and regulations.

Early Alert Referral Program

Roslana D. Gray

Submitted in Partial Fulfillment of Doctorate of Nursing Practice Degree

Regis University

December 2014

## **Abstract**

### **Early Alert Referral Program**

Early recognition of academically at-risk nursing students by faculty plays an important role in increasing retention rates. The main objective of the early alert referral program is to systematically detect early students who are academically for failure and refer at-risk students to faculty or support services, to increase nursing retention rates.

The Early Alert Referral Project is a quantitative design in terms of purpose and methodology. The program was held in a classroom in a rural community college in Alabama during the summer semester (May, June, July, August) 2014. All practical nursing students currently enrolled in summer 2014 cohort were included on a volunteer basis. A convenience sample of eight practical nursing students enrolled in NUR 105 were included in the study. A total of three students were recognized as at-risk by nursing faculty. Course faculty completed an early alert check list identifying all at-risk characteristics or behaviors demonstrated by the student. The at-risk check list was completed by faculty before and after admission into the nursing program during midterm. The student (s) were notified by the health careers chair encouraging an individual meeting to discuss the referral.

The retention rates before implementing the at-risk program were compared to retention rates summer semester 2012, summer semester 2013, summer semester 2014, and after one semester of implementation of the project. After implementation of the early alert referral intervention summer 2014 six students passed the course. There was no statistically significant change in the retention rates summer 2014 as compared to the rates from 2013 and 2012.

**Keywords:** DNP Capstone, early-alert referral program, student retention.

Copyright ©2014 Roslana Denise Armstrong Gray. All rights reserved. No part of this work may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the author's prior written permission.

## Executive Summary

### Early Alert Referral Program

#### **Problem**

Student nursing retention is a dynamic and multidimensional phenomenon that requires continuous studies of contributory variables. Inconsistencies that exist between nursing students' admission in the nursing program, along with the rapid transition into the workforce has a tremendous effect on the present nursing shortage along with low retention rates in schools of nursing (Jeffreys, 2012). Based upon these empirical findings, the following question based on the population, intervention, comparison, and outcome (PICO) model was designed: "Will the creation and implementation of an early alert referral program for practical nursing students who are academically at-risk for failure increase retention rates?"

#### **Purpose**

The purpose of the Capstone Project/application to practice study is to design and implement an early alert referral program for at-risk nursing students to: systematically detect early at risk nursing students' profiles, refer at-risk students to faculty or support services, promote student success, and increase retention of nursing students .

#### **Goals**

The Capstone Project's goals were to improve retention rates of practical nursing students who are academically at-risk for failure.

#### **Objectives**

The objectives of the Capstone Project included providing strategic, intensive, and evidenced-based interventions to assist practical nursing students in becoming academically successful.

#### **Plan**

The Doctor of Nursing Practice project model served as a template and guide for the DNP scholarly Capstone Project (Zaccagnini & White, 2014). Steps I & II: A needs assessment was conducted after recognizing a need among the practical nursing student population to address retention rate improvements. Step III: The mission statement/goals/objectives were developed. Step IV involved execution of a work planning which included creating a time-line. Step V: Consisted of implementing the oral and written proposal. Step VI: The Logic Model was developed and the recognition of quality improvement methods. Step VII: IRB approval was obtained from Reid State College and Regis University. Potential threats and barriers to the Capstone Project were established and reduced. Steps VIII and Steps IX included data interpretation and analysis.

#### **Outcomes and Results**

A total eight students completed the early alert referral intervention. A total of three students were identified as "at-risk" within this population. Retention rates from nursing students from summer semesters 2012- 2014 were compared. Data analysis revealed no statistically significant changes in retention rates after implementation of the intervention. However, the intervention program will surely be pragmatically useful in the future as a strategic initiative to improve retention rates and promote student success. Further study with larger samples is warranted.

## Acknowledgments

First, I want to give praise, honor, and glory to my Lord and Savior Christ for allowing me through His grace favor to complete this great accomplishment. There were many times I wanted to quit, but I was reminded by your Word that your grace is sufficient for me and has strengthened me especially during many times of great discouragement and weakness.

To my wonderful and dear husband Greg. I thank you so much from the bottom of my heart for pushing me and supporting me till the very end. I will always love you, until death do us part. I would not dare leave out my children: Markeisha, Mark, Nikeiya, Ayden and Ezra who are uniquely apart of my aspiration for achieving this milestone. I want to thank my parents Robert and Gloria Jean Armstrong and my aunt Ann Booker for all of their encouraging words of support. Furthermore, I would like to thank my spiritual mother and mentor Reverend Dr. Dorothy D. Davis, for all of her prayers and “don’t you dare quit” talks. Lastly, I would not dare end the acknowledgements without sending a special thank you to my dear friend Carol Byrd-Lymon and clinical mentor Mrs. Lula English. Thank you all for your support and just listening to me cry!

I want to extend my gratitude to all of my professors in the Doctor of Nursing Practice Program at Regis University. Special gratitude and appreciation is owed to Dr. Lora Claywell. Dr. Claywell thank for your patience, expertise and just putting up with me. I would also like to thank Dr. Carol Goldstein (who saw the best in me), Dr. Patsy Cullen, and Dr. Cheryl Kruschke. Your feedback, expertise, leadership, and guidance have been so beneficial and greatly appreciated. To my DNP cohort class 2014, I love you all and thank you for your words of encouragement.

## Table of Contents

I.	Preliminary Pages.....	i
I.	Abstract.....	i
II.	Copyright Page.....	i
III.	Executive Summary.....	ii
IV.	Acknowledgements.....	iii
V.	Table of Contents.....	iv
VI.	List of Tables.....	viii
VII.	List of Appendices.....	ix
II.	Introduction.....	1
III.	Problem Recognition.....	1
A.	Problem Recognition.....	1
B.	Population/Intervention/Comparison/Outcome.....	2
C.	Project Significance.....	3
D.	Theoretical Foundation.....	4
a.	Tinto's Theory of Retention.....	4
b.	NURS Model.....	4



c. Bandura’s Theory.....	5
d. Lewin’s Change Theory.....	6
IV. Review of Evidence.....	7
A. Background of Problem.....	7
B. Literature Review.....	7
V. Project Plan.....	13
A. Market/Risk Analysis.....	13
B. SWOT Analysis.....	14
C. Driving Forces.....	15
D. Resources and Sustainability.....	17
E. Risks.....	17
F. Stakeholders.....	18
G. Project Team.....	19
H. Strategy.....	19
I. Budget.....	20
J. Cost-Benefit Analysis.....	21
K. Mission, Vision, Goals.....	22

L.	Early Alert Referral Program Objectives and Outcomes.....	22
VI.	Evaluation of Project.....	23
A.	Logic Model.....	23
B.	Outcome Question.....	25
C.	Study Design.....	26
D.	Population.....	26
E.	Informed Consent.....	27
F.	Variables.....	28
G	Timeframe.....	29
H.	Setting.....	29
I.	Human Subject's Protection.....	29
J.	Instrumentation, Reliability/Validity.....	30
K.	Data Procedure.....	31
L.	Date Presentation Procedure.....	33
VII.	Project Findings and Results.....	34
A.	Detailed Statistical Findings From Instrumentation.....	34
VIII.	Strengths, Limitations, Recommendations, Implications for Change.....	35

A.	Limitations.....	35
B.	Recommendations.....	36
C.	Practice Implications.....	36
IX.	Conclusion.....	36
X.	References.....	39

## List of Tables

I.	Literature Selection.....	9
II.	Level of Evidence.....	10
III.	SWOT Analysis.....	16
IV.	Budget to Replicate Project.....	21
V.	Study Variables and Types.....	28
VI.	Retention Frequency Table.....	32
VII.	Retention Graph.....	34

## List of Appendices

A. Systematic Review of Literature.....	43
B. Capstone Time Line.....	58
C. Logic Model.....	59
D. Early Alert Referral Algorithm.....	60
E. Consent Letter to Participants.....	61
F. Student Self-Improvement Plan.....	62
G. Early-Alert Referral At-Risk Check List.....	63
H. At-Risk Referral Form.....	64
I. CITI Certificates.....	65
J. Approval IRB from Regis University.....	71
K. Approval IRB from Sponsoring Institution.....	72
L. NURS Model.....	73
M. Lewin Change Theory.....	74

## Early Alert Referral Program

The nursing faculty, students, American Association of Colleges of Nursing, The Alabama Board of Nursing and nursing programs nationally are recognizing the student nursing retention issue as a threat to the nation's nursing shortage (American Association of Colleges of Nursing, 2013). Faculty members are usually the first to recognize at-risk students and are in a unique position to address the current problems of retention. However, factors that influence academic success are different for each student. Faculty administrators and advisors often overlook factors that influence student success (Rose, 2011). According to Shelton (2000) it is helpful for nursing faculty to convey psychological and functional supportive strategies since students feel their advice is significant. Besides, these strategies convey an attitude of caring and promotes student efficacy (Mason, Leavitt, & Chaffee, 2007). Consequently, it is advantageous to examine with haste, all potential alternatives toward retaining and educating nursing students. Students are also aware of the retention issues. They believe that faculty availability, communication involving expectations, problem identification and resolutions will be beneficial towards the preparation of academic success (Shelton, 2000).

### **Problem Recognition**

#### **Problem Statement**

The purpose of the capstone project was to design and implement an early alert referral program for at-risk nursing students to: systematically detect early at risk nursing students' profiles, identify characteristics of at-risk nursing students, distinguish academic performances of at risk students, refer at-risk students to faculty or support services, promote student success, and increase retention of nursing students at this organization. The early alert referral program

will consist of strategic and intensive, evidenced-based interventions to help students become academically successful. The results of the study will further expand the conceptual comprehension of the multidimensional phenomena of student retention and success (Jeffreys, 2012). Likewise, empirical evidence will provide further insight into the significance of early detection of at-risk students by faculty at this organization. The study is significant to nursing educators because the outcome may provide additional information by which to guide their educational practice.

### **Population/Intervention/Comparison/Outcome (PICO)**

The Doctor of Nursing Practice student will act as an evidenced based change agent in the implementation of a program of detection, referral, and support of academically at-risk students. The Implementation of the Patient Problem or Population, Intervention, Comparison, and Outcome (PICO) format directs clinicians in finding the right evidence to answer clinical or practice questions. Moreover, the PICO assists in the identification of key search concepts for relevant literature to assist practice (Melnik & Fineout-Overholt 2005; Houser & Oman, 2011).

The Doctor of Nursing Practice (DNP) Capstone Problem is as follows:

- Population-Practical nursing students in a rural college in Alabama
- Implementation- Creation of an early alert/detection referral program for practical nursing students who are academically at-risk for failure.
- Comparison- Current procedure of student written self-improvement plan initiated with academic jeopardy at mid-term.
- Outcome- Increase in retention rates by the end of one semester

Project Research Question- Will an early alert referral program initiated by nursing faculty prevent academic failure and improve retention rates among at-risk nursing students?

### **Project Significance**

The purpose of the capstone project is to design and implement an early alert referral program for at-risk nursing students to: systematically detect early at-risk nursing student profile, identify characteristics of at-risk nursing students, distinguishing academic performances of at-risk students, referral of at-risk students to faculty or support services, enhance student success, increase retention, and decrease attrition. The student profile of characteristics will give faculty insight as to what variables (environmental, academic or psychosocial) may lead to academic demise. In order to achieve student success, faculty must identify early any existing or potential variables that will place students at-risk for academic failure status. Moreover, differentiating academic performances of at-risk students and referring the students to appropriate faculty or support services will also aid in academic success.

The results of the study will further expand the conceptual comprehension of the multidimensional phenomena of student retention and success (Jeffreys, 2011). Furthermore, empirical evidence will provide further insight into the significance of early detection of at-risk student by faculty. The study is significant to nursing educators because the outcome will provide sufficient data on how to increase student success. According to Terry (2012) understanding and identifying at-risk students will aid nursing faculty in supporting students



functionally and psychologically increasing the graduation rates, and decreasing the drop-out rate due to academic failure.

### **Theoretical Foundation**

**Tinto's Theory of Retention.** Tinto's Theory of Retention is a conceptual framework considering student persistence in relationship to the level of integration attained within a learning institution (Shelton, 2002). The model as a basic premise defines attrition as a longitudinal process beginning when students present into a nursing program with individual attributes, family background and academic character and capabilities. Furthermore, the theory proposes that student persistence is related to a certain degree of social and academic integration within the college campus environment (Shelton, 2000; Wells, 2003). Integration as proposed by Shelton (2002) is the interconnectedness of students into the community and the feeling of acceptance experienced by the student. The variables noted in the academic systems include academic performances and interactions experienced or demonstrated by faculty and staff (Wells, 2003). Tinto proposed that increased social and academic integration experienced among students within the college campus will cause an increase in retention and graduation rates (Shelton, 2002).

**NURS Model.** The NURS Model (see Appendix N) as proposed by Jeffreys (2012) is a conceptual framework used for examining multidimensional factors that may contribute to nursing student retention and success. The purpose of the model is to develop diagnostic and prescriptive strategies promoting academic success, guide innovations in teaching and educational research and to evaluate the effectiveness of all interventions and implemented strategies (Jeffreys, 2012). Several models have been presented to examine college attrition and

retention. However, the NURS Model uniquely focuses on the aspect of retention as well as targets a specific student population. The objective of this model is to promote undergraduate nursing student retention and success. The model specifically indicates that retention decisions made by students are based on their profile characteristics, affective behaviors, academic factors (variables), environmental variables, professional integration and psychological factors. The NURS Model sheds a different light on social integration as related to student nurses. In addition, the framework proposes that faculty integration factors represent variables that enhance students' interaction socially within the college environment (Jeffreys, 2012). Professional integration strategies such as nursing faculty advisement and helpfulness, an enrichment program, and peer mentoring-tutoring are all instrumental in nursing student retention. Likewise, nursing faculty who advise students and who are helpful in assisting students are paramount toward the enhancement of nursing student retention rates (Jeffreys, 2004).

**Bandura's Theory of Self Efficacy.** According to Jeffreys (2012) Bandura's Self Efficacy cognitive theory proposes that learning and motivation are influenced by self-efficacy. Self-efficacy can be defined as students' perception of their confidence for learning or the performance of skills or task in order to achieve a goal. In addition, it has been linked to student persistence and motivation plus a unique factor influencing students' actions, persistence and performance. Besides, the driving force of self-efficacy in success driven students yields academic achievement in whatever discipline preferred. Furthermore, students who have resilience and self-efficacy are able to acknowledge demanding tasks and obstacles. Strong commitments are often implemented along with persistent behavior manifestations and

more energy is also demonstrated to overcome failures. Jeffreys (2012) feels that students who have strong self-efficacy demonstrate increased motivation and actively seek help to maximize their abilities. Conversely, students who have low self-efficacy view challenges as overwhelming and all threats and anticipated hardships are often avoided (Jeffreys, 2012).

**Lewin's Change Theory.** According to Zaccagnini and White (2014) a change model or theory is needed to guide decisions and facilitate change assimilation into practice. During the initial planning of an institutional or program change, interventions must synthesize theoretical concepts related to the readiness of the target audience to cause change. As evidence based change leaders, DNP graduates must become familiar with change theories as we further engage in innovative approaches that implement change (Zaccagnini & White, 2014). Lewin's Change Theory (see Appendix O) consist of three stages unfreezing-change-refreezing. Likewise, the concept is a framework that is applicable for use by the DNP graduate while in the process of planning institutional or program interventions or change.

The initial unfreezing phase ensures that faculty are ready for change. Unfreezing involves motivating and empowering nursing faculty to adopt the intervention. This phase also allows nursing faculty to recognize the need for change from "what we use to do". The vision statement during this phase must be clearly shared by all involved. Faculty can encourage and motivate students to strive for persistence towards becoming academically successful.

The second phase of change involves execution of the intended change. The intervention or change implemented was a faculty initiated early/alert recognition program for academically at-risk practical nursing students.

Refreezing or “freezing the process in place” is the third phase of the theory. The ultimate task of anchoring the change into place requires continuing vigilance. Those involved in the change are responsible for integration, implementation and adoption of new behaviors and practices into standards allowing others to take ownership of the project as well as empowering them along (Zaccagnini & White, 2014)

## **Review of Evidence**

### **Background of Problem**

Student nursing retention is not a new problem, nor has it been resolved. With the existing nursing shortage, the demand for new nurses for the workforce is steadily increasing. According to Ramsburg (2007) from a historical perspective, nursing has experienced cycles of shortages and demands in past years. Nonetheless, the current shortage is expected to linger lasting longer than any nursing shortage. Many nursing programs are increasingly focused on improving retention rates among their nursing students through a variety of services and programs. By the year 2020, it is anticipated that a 29% nursing deficit will transpire (Ramsburg, 2007).

The nursing faculty, students, American Association of Colleges of Nursing, The Alabama Board of Nursing and nursing programs nationally are recognizing the student nursing retention issue as a threat to the nation’s nursing shortage (American Association of Colleges of Nursing, 2013). Faculty members are usually the first to recognize at-risk students and are in a unique position to address the current problems of retention. However, factors that influence academic success are different for each student. Faculty administrators and advisors often

overlook factors that influence student success (Rose, 2011). According to Shelton (2000) it is helpful for nursing faculty to convey psychological and functional supportive, since students feel their advice is significant. Besides, these strategies convey an attitude of caring and promotes student efficacy (Mason, Leavitt, & Chaffee, 2007). Consequently, it is advantageous to examine with haste, all potential alternatives toward retaining and educating nursing students.

Students are also aware the retention issues. They believe that faculty availability, communication involving expectations, problem identification and resolutions will be beneficial towards the preparation of academic success (Shelton, 2000).

## **Literature Review**

Evidence-based interventions were established based upon a completed systematic review of literature (see Appendix A). According to Houser and Bokovoy (2006) a systematic review is a process that determines the best possible evidence for clinical practice by appraisal, synthesizing, and identifying current and relevant literature. Thirty-four relevant articles were found for inclusion in systematic review of evidence. The literature includes a number of peer-reviewed journals, articles and papers from electronic databases (see Table 1). The obtained literature review encompassed structured, thorough, and descriptive evidence related to retention of nursing students. The key search words included terms such as: retention, student retention, at-risk students, at-risk nursing students, nursing student success, faculty support, and retention among nursing students were applied to Google Scholar, Cumulative Index to Nursing and Allied Health Literature, EBSCO Host, Pro Quest. On line research of the following journals were implemented: the Journal of Nursing Education, Teaching and Learning in

Nursing, Nursing Education Today, Journal of Professional Nursing, and Nursing Education Perspectives. The focus of literature research was on practical nursing diploma programs, associate degree programs in nursing and the Bachelor of Science in nursing programs.

Table 1

*Literature Selection*

Search Engines	Database	Key Words & Results	Online Journals
<b>Google Scholar</b>	Cumulative Index to Nursing and Allied Health Literature- (CINAHL)	“Nursing Retention”- 20,000 results	Journal of Nursing Education
		“At-risk nursing students”- 12,000 results	Teaching and Learning in Nursing
		“Student retention at-risk”- 1,100 results	Nursing Education Today
<b>EBSCHO Host</b>		“Nursing student success”- 10,000 results	Journal of Professional Nursing
		“Faculty support”- 1,200 results	Nursing Education Perspectives
<b>Proquest</b>		“Retention among nursing students”- 1800 results	

The scope of evidence was based on the seven tiered levels of evidence which was used to categorize the levels of evidence obtained from the systematic review of literature (Houser & Oman 2011). These hierarchical models are used to assist clinicians in decision making and as a guide for clinical practice.

Table 2

*Level of Evidence*

<b>Qualitative Evidence</b>	<b>Quantitative Evidence</b>
<b>Level of Evidence</b>	<b>Level of Evidence</b>
<b>Level VII- (3)-Evidence obtained from expert opinions, regulatory opinions and or reports of expert committees.</b>	<b>Level I-(3)-Systematic Reviews</b>
	<b>Level III- (4)- Evidence obtained from quasi-experimental studies</b>
	<b>Level IV- (12)- Evidence obtained from non-experimental studies</b>
	<b>Level V- (4)- Evidence obtained from systematic reviews of descriptive and qualitative studies</b>
<b>Houser &amp; Oman(2011)</b>	<b>Level VI- (7) –Evidence obtained from a qualitative study.</b>

**Early Recognition by Nursing Faculty Predictor of Nursing Student Success.**

Jeffreys (2006) completed several qualitative, descriptive and inferential studies in which the overall purpose was to track and assess the entry, progression, and academic characteristics of nursing students. Findings in five articles and two books supported the importance of early identification of variables that place students at-risk for attrition and academic failure. Jeffreys (2006) states that nursing faculty are in a “powerful position” to

enhance student nursing outcomes by immediately initiating interventions upon recognition of academically at-risk behaviors by nursing students (see Table 2).

Davenport (2007) states that the promotion of interventions such as academic referrals and social support referrals are effective strategies that will increase retention among nursing students. Once the students are identified by faculty, a database should be established coding or identifying the students as at-risk. The database will assist in managing information students who fit the at-risk criteria. Faculty will assist in the identification of at-risk students, advising those who are at-risk and manage all referrals, referral outcomes, and all other implemented strategic interventions. Furthermore, Davenport (2007) strongly suggested that faculty pilot all test interventions, collect all data and share all findings with students and the project team. In doing this, the sufficient data will aid faculty in designing new innovative strategies preventing current and future students from falling in pits and perils of attrition, Davenport (2007).

Colalillo (2007) states student success is greatly influenced by faculty supportive strategies, involving behaviors that are psychologically and functionally supportive. Strategic initiatives implemented by nursing faculty should be flexible meeting the constant changing demands of students, culturally competent, and instruction emphasis should be placed on factors that will enhance student learning.

According to Williams (2010) faculty who demonstrate a caring and trusting attitude gain the confidence and respect of students. Constructive strategies implemented by faculty has motivated students to foster a culture of persistence toward success. In addition, interventions that directly targeted challenges identified by the student also produced academic success.



Terry (2012) conducted a systematic review of literature identifying paradigm shifts in the learning environment of nursing students from teacher-centered teaching to student self-directed learning. As students' progress into the recommended self-learning environment, faculty must provide them with support as well as the promotion of critical thinking concepts, autonomy and professional identity.

**Non-Academic Variables-Predictor of Student Success.** Shelton (2000) conducted a study on the current student enrollment profile of the non-traditional student which are as follows: older than 20, have family responsibilities, have more than one child, employed in addition to attending school, live at home, married, out of high school for several years, first generation (the first in the family for generations to attend college), need more remediation, not ready for college, and lack critical thinking skills.

A study conducted by Peterson (2009) concludes that students drop out of nursing school due to three sets of interactive variables: poor academic performance, psychological variables such as stress and motivations problems, and background variables such as age, demographics, ethnicity and gender. Peterson (2009) defines self-efficacy as a personal judgment, concerning an individual's ability to successfully perform a particular behavior or task. In addition, self-efficacy can be hypothesized to increase the likelihood of academic success. Once faculty recognize students who are inefficacious, diagnostic prescription intervention will aid students minimizing assessed weaknesses and maximizing strengths toward success.

**Academic Variables as Predictor of Academic Success.** According to Hopkins (2005) successful outcomes of college students can be predicted by college admission staff.

Furthermore, a strong correlational study has concluded that high school GPA and cumulative college GPA typically can predict student success. On the other hand, there are those studies that focus on SAT as a predictor of success (Hopkins, 2005).

**Reasoning Test as a predictor of college success.** Hopkins (2005) believe that in order for nursing programs to have effective and high retention rates, focus should be placed on academic and non-academic variables as factors that contribute to and predict student success. The number of non-traditional students that are entering two year colleges need more remediation, are typically less prepared for college, lack confidence in their learning capabilities and are at greater-risk for failure (Rudel, 2006).

## **Project Plan**

### **Market Risk Analysis**

The early alert referral program will attain success by implementing a support services promoting student success. The project will be student focused as well as aimed at meeting the immediate market needs of academic success, student retention and attrition, graduation and increase in cohort completion rates. Early faculty initiated interventions will be aimed at enhancing student success, systematically assessing at risk student's profile characteristics, immediate identification of early variables that place students at-risk for attrition, and delayed program completion (Jeffreys, 2007). Teamwork, effective communication, integration, and interdisciplinary collaborations will be beneficial toward student and project success.

The rapport that currently exists between the community, business and industry leaders are viewed as one of the major strengths of the institution. The sponsoring college's council and program advisory committees are active promoters and advocates establishing collaborative community partnership, The Alabama State Board of Education, community residents, students and their families, local economic and community leaders, health care delivery systems, and other surrounding colleges are other examples of sources community collaborations. The excellent community affiliation has enhanced attraction of qualified staff towards employment. In addition, the sponsoring institution has notable reputation for hiring graduates of the college.

The sponsoring institution has caused economic growth and development for the local township as well as assisted in the development of the city's strategic plan. In the spirit of scholarship, collaboration, and technological specialization, the sponsoring institution will continue providing educational opportunities to all students.

A SWOT analysis is a needs assessment tool which stands for strengths, weaknesses, opportunities and threats (Zaccagnini & White, 2014) Use of the business tool was a simple way to help the project leader discern the strengths, address the weakness, where to look for opportunities as well as watchful for any potential or existing threats to the project( Zaccagnini & White, 2014). The strengths and weakness are internal to the project whereas the opportunities and threats are external to the project. The strengths signify what the project organization can do better than anyone else around them or the advantages the organization may have over other organizations. The weaknesses are areas inside the organization needing improvement. Furthermore, the weakness requires either that one addresses the areas or ignores them. This affords the project leader the opportunity to explore the environment for potential

strategies new phenomena, and for laws or markets that will identify the opportunities (Zaccagnini & White, 2014). The project leader was able to see potential threats that could have caused the regression of the capstone project. During this assessment phase, the competitor was identified. In the sponsoring institution's case the threats were financial aid issues, a new plant opening in the area, decrease in enrollment and another community college twenty miles south. The information obtained from the analysis was helpful in identifying factors that had the potential to impact successful completion of the Capstone Project.

### **Driving Forces**

The SWOT analysis was the driving force for this capstone project. The analysis proved that there was a need for a faculty initiated early alert program to increase retention rates. The implementation phase of the capstone project at the sponsoring institution triggered positive feedback among faculty due to its efforts to increase retention among practical nursing students. The challenges which accompanied the retention strategies were initiatives that would support nursing students.

The restraining forces were lack of student funding, transportation, rural demographics and lack of support from the local city government. The need for an early alert referral program as stated previously will establish a strong foundation support system for student retention and student success.

Table 3

*SWOT Analysis*

<p><b><u>Strengths</u></b></p> <ul style="list-style-type: none"> <li>• Campus Centrally Located</li> <li>• Open Door Policy</li> <li>• Meets the demands of the healthcare delivery systems</li> <li>• Reputation of excellence in the community</li> <li>• Strong Faculty Support</li> <li>• High NCLEX Pass Rates</li> <li>• Promotes economic Growth</li> <li>• Facilitates articulation with the local high school</li> </ul>	<p><b><u>Weakness</u></b></p> <ul style="list-style-type: none"> <li>• Rural Demographics, impoverished</li> <li>• Financial Aid</li> <li>• Students are economically disadvantaged</li> <li>• Professional Development</li> <li>• Non-traditional student body</li> <li>• Program Costs</li> <li>• Attrition</li> <li>• No available student success center</li> </ul>
<p><b><u>Opportunities</u></b></p> <ul style="list-style-type: none"> <li>• Better Learning Outcomes</li> <li>• New nursing progression policies</li> <li>• Employment of diverse staff</li> <li>• Community Relations</li> <li>• PN program</li> <li>• Combat the current nursing shortage</li> <li>• Service area of six counties in Alabama</li> </ul>	<p><b><u>Threats</u></b></p> <ul style="list-style-type: none"> <li>• New title Four Financial Aid Regulations</li> <li>• New Plant Opening In the area</li> <li>• Administration support</li> <li>• Competitors</li> <li>• Low Enrollment</li> </ul>

## **Resources and Sustainability**

The strategic planning process of the capstone project included a complete assessment of the resources needed for completion of the project. The following resources and support systems were found to be essential for implementation and completion of the early alert referral program:

- Practical Nursing students who were faculty referred into the early alert program
- Technical Support
- Support from administration and faculty

Funding for the early alert program was provided by the sponsoring college. The college agreed to support all means necessary to retain students. This included technical support and instructor wages. However, minimal expenses were utilized and the long-term sustainability of the early alert referral project was deemed viable. Findings of the Early Alert Referral Program was shared with the Health Careers Chairperson. Changes in nursing retention policies may also be implemented.

## **Risks**

The Early Alert Referral Project will not solicit names or any other identifying information from respondents. No one at any time will be able to view any documented responses or outcomes related to respondents.

Although this research project will not collect data from identified subjects, steps will be implemented to maintain confidentiality of all information obtained that may have been used to identify students as at-risk. This information is normally available to the investigator as a usual part of the faculty role and is protected under prudent privacy regulations. The Alliant

database will be the commercial database system used during the project's implementation. The system is designed to manage data relevant to academic advising, financial aid, course final grades, administrative, financial affairs, and student records. Correspondingly, the database was used for storage of students' academic information and was accessible only to the project investigator. The data is stored within a limited access electronic files on the institution's secure sever. A back up flash drive was used to store data pertaining to the study and is currently in a locked storage cabinet. Only the project's investigator has access to the flash drive containing the data. At no time will any individual faculty member, nursing faculty, or any other college faculty and staff will have access to the information. Only aggregate data analysis and evaluation related to retention rates will be reported for dissemination of results.

### **Stakeholders**

According to Zaccagnini and White ( 2014) stakeholders are individuals who are included in the project are also considered partners with the academic institution in an effort address institutional or departmental barriers. The practical nursing students at the sponsoring institution were the largest group of stakeholders for the success of the early alert referral program.

The sponsoring institution was a stakeholder. Retention rates improvement strategies are considered by college's administration and faculty as a prominent priority. The college's financial stability is dependent upon the number of students who are enrolled in courses and retention rates. The sponsoring institution's recent concern has been on the percentage of students who begin in programs and on those who do not complete the program. According to

Jeffreys (2004) academic and environmental factors, professional integration factors, academic outcomes and psychological outcomes influence retention rates. The current financial environment of the sponsoring institution, has invoked an urgency in finding fiscal solutions to combat the retention problems.

The legislative and executive bodies are stakeholders who have a major role in facilitating, promoting, and extending health protection including legislative decisions on its forums. Faculty, health care agencies, the City of Evergreen, community residents, local businesses and industries, State's Board of Nursing, Two Year College System and The Council on Occupational Education are also other key stakeholders who support the early alert project. Implementation of a new early alert referral program has the potential to enhance education, retention, decrease attrition as well as impose an overall positive effect on student success.

### **Project Team**

The capstone project team member includes the President of the College, Dean of Instruction and Student Services, Health Careers Department Chair, capstone chairperson, nursing faculty and the DNP candidate. The overall goal of the capstone project team was to work collaboratively and professionally in building a systematic program of evaluation and planning in an effort to accomplish the capstone project's mission (Zaccagnini & White, 2014).

### **Strategy**

An early alert referral program was offered summer semester for all practical nursing students enrolled at the sponsoring institution's off site campus located 50 miles south.



According to the American Association of Colleges of Nursing (2006) doctoral education completion project demonstrates synthesis of the students' work and lays the groundwork for future scholarship. Furthermore, the final project should include a synthesis of all courses mastered within the doctor of nursing practice curriculum. The Regis University Doctor of Nursing Practice curriculum has incorporated all courses suggested by the American Association of Colleges of Nursing into their plan of instruction and their content has developed the current capstone project presented by the doctor of nursing practice candidate.

The early alert referral program was designed and implemented according to Jeffrey's NURS Model. The early alert referral program was placed into practice in order to improve retention rates among practical nursing students.

### **Budget**

An accurate and detailed budget is important in order to project long-term sustainability of a project (Zaccagnini & White, 2014). The expenses for the early alert referral program consisted of both fixed and variable costs. The fixed cost as depicted were the expenses that were not dependent upon the level of essential materials but has a tendency to be time-related factors including the salary of faculty, classroom rental space, technical support, equipment and utilities. According to Cleverly, Song, and Cleverly (2011) the largest fixed cost center of project are the salaries of faculty. A budget was proposed to the administrative staff at the selected community college after approval for capstone project was obtained.

Table 4

*Budget to Replicate Project*

<b>Project Resources</b>	<b>Cost of Resources</b>	<b>Total Budget</b>
<b>Early Alert Referral Faculty</b>	<b>8 hours= \$280.00 (\$35.00 per hour)</b>	<b>Not applicable – DNP candidate was instructor</b>
<b>Classroom Facility</b>	<b>8 hours = \$400.00</b>	<b>Waived per Community College</b>
<b>Technical Support</b>	<b>1 hour= \$20.00</b>	<b>Waived per Community College</b>
<b>Equipment: Flash Memory Drive, Folders, Copier, Toner, Copier Paper</b>	<b>\$150.00</b>	<b>\$150.00 (already in faculty instructor's budget)</b>
<b>Total Cost</b>		<b>\$150.00</b>

**Cost Benefit Analysis**

According to Houser and Oman (2011) a cost benefit analysis speak a language many financial managers appreciate and understand regarding a project's expenditures. Furthermore, it is a powerful tool to promote the project to sponsors and others with vested interests (Zaccagnini and White, 2014). Faculty implementation of the intervention and time time spent with students was considered as costs. The benefits of implementing the early alert referral

program were: there were no cost to the participants, reduction in attrition, increase in retention rates and increase in nursing enrollment.

### **Mission, Vision, Goals**

The early alert referral program is a retention initiative designed to identify academically at-risk nursing students who are exhibiting behaviors leading to academic demise. The mission statement of the early alert referral program is to identify early students who are demonstrating academically at-risk behaviors by: establishing an early referral process initiated by nursing faculty. The vision statement defines the aspirational achievement for the project. The early alert referral program strives to provide innovative and comprehensive services to all academically at-risk nursing students. Students will be provided with early strategic interventions and collaborative efforts by nursing faculty in order to increase academic success and retention rates afforded every opportunity to reflect on any identified obstacles whether academic, personal, existing, or imminent which may contribute to any at risk academic performances causing failure of the nursing curriculum.

### **Early Alert Referral Program Objectives and Outcomes**

The objectives of the early alert referral program is for students to receive early recognition of academic difficulties by faculty along with critical comprehensive supportive services in an effort to resolve the issue of student nursing retention. Furthermore, faculty will respond to the student needs, encourage persistence, provide academic advising and counseling, recognize factors that decrease nursing retention rates, implement interventions

which involve assisting students establish long and short term goals subsequently guiding them through attaining the goals.

## **Evaluation Plan of the Project**

### **Logic Model**

According to Kane and Radosevich (2011) a conceptual model such as the logic model simply and clearly explicates what process the investigator considered occurred or what elements were controlled in the analysis portion of the project. The logic model used for this capstone project is a visual model (see Appendix C) which specifies the underlying rationale for organizational change. It illustrated several ways to address the research problem, manage and measure organizational performance, along with highlighting the essential components needed for implementation and evaluation of the early alert referral program for practical nursing students. Logic models place emphasis on measurable indicators providing a means to focus attention on expectations for performance and establishes accountability (Herranz, 2010).

Students were identified as at-risk for academic failure if the following characteristics are present: academic variables present during admission: a Grade Point Average of 2.5 minimum on the last 24 credit hours of college course work for students who have attended college, an ACT score of 17 or below, Compass writing score of 62 or below, Compass math score of 36 or below, Compass reading score of 76 - after admission, academic course grade average of <75 by midterm, excessive tardiness (more than 2 per week) or two or more

absences from class. The following algorithm will outline the implementation/intervention phase of the project.

-Faculty will complete an at-risk referral check-list identifying students who demonstrate at-risk behavior (academic variables)

#### **Academic Variables Present After Admission**

- <75 in nursing courses
- More than 2 absences a week
- Excessive tardiness (more than 2 a week)

#### **Academic Variables Present During Admission**

- GPA- 2.5 minimum
- ACT score of 17 or below
- Compass Scores:
- Writing-62 or below
- Math- 36 or below
- Reading – 76 or below

Students were given a self- improvement plan listing reason (s) that may have/has attributed to an academic at-risk status. They were instructed to list actions they plan to implement to improvement at-risk behaviors. Based on self-report of issues, the following resources will be provided:

- Time Management Problems- <http://www.dartmouth.edu/~acskills/handouts.html#Time>.
- Poor test taking skills- <http://www.dartmouth.edu/~acskills/handouts.html#Time>.
- Faculty initiated test-taking strategy classes: <http://evolve.elsevier.com>

- Financial Problems- Dean of Students, Guidance Counselor.
- Poor Study Skills- <http://www.dartmouth.edu/~acskills/videos/index.html>.
- Faculty initiated group study <http://www.evolve.elsevier.com>. Students will be referred to this website for guided study sessions, academic enrichment workshops and smart study strategies.

Course faculty completed an early alert check list identifying all at-risk characteristics or behaviors demonstrated by the student. Subsequently, the project investigator obtained and reviewed all findings and they were communicated to the nursing division chair.

The student was notified by the health careers chair encouraging an individual meeting to discuss the referral. During the consultation, the student was allowed to discuss and address whatever issues he/she may have. Students were offered additional services such as interdepartmental and external services based on the information the students documented on student self- improvement form. The retention rates before implementing the at-risk program was compared to retention rates after one semester of implementation of the project. Project findings in terms of retention rate change was shared with the institution's health careers chairperson. The above algorithm served as a guide towards the achievement of the objectives and outcomes of the early alert referral program (see Appendix D).

### **Outcomes Question**

The capstone project's outcome question was would a faculty initiated early alert referral program for practical nursing students at the selected sponsoring institution increase retention rates. According to Jeffreys (2012) professional integration enhances student's

interaction with the social system of the environment of the college which increases student persistence and retention. Nursing faculty are key initiators as well as advocates of professional integration because they possess the power to actively and positively affect retention. As active partners in the complex cycle of retention, nursing educators are in a position to design theoretically and evidence-based retention strategies targeting academically at-risk nursing students (Jeffreys, 2012).

### **Study Design**

According to Fain (2004) a quantitative research design is based on measurements and analysis of causal cause and effect relationship between variables at a particular point in time. The quantitative design is the best approach to answer the DNP's research question in order to provide the most accurate and interpretable data. The capstone project is an Early Alert Referral Project which is a quantitative design in terms of purpose and methodology with a time-sequence of measurement of outcomes from summer semester 2014. The project's design is retrospective in which the proposed cause and effect have already occurred and data related to nursing retention rates for summer 2014 will be observed along with retention rates from previous semesters (2012-2013).

### **Population**

A single student body was used for this capstone project. All practical nursing were eligible to self-enroll and were also referred by nursing faculty. Only a sample population of eight students were implemented in the study.

## **Informed Consent**

The ethical standard of autonomy governed the conduct of the project's chief investigator since the protection of human rights is one of the essential responsibilities. Implementation of the ethical principle provided all participants the right to make an informed decision whether to participate in the research studies. Furthermore, all potential participants were informed the risks that could occur during the course of the research (Appendix E). Risks to the subjects were minimized: Selection of subjects were equitable (women, individuals of a particular race or ethnicity were not excluded). The participants were allowed to make a decision as to whether or not they want to participate in the study. The decision not to participate did not affect their relationship with the institution. If the participants decided not to participate or refusing to meet with the division chair for counseling when encouraged to do so, they were free to withdraw their consent and discontinue participation at any time without penalty. The participants validated their understanding by signing the form. The consent forms were kept in a folder in a locked cabinet located within the nursing department in the chief investigator's office. The ethical standards of beneficence-no harm done to subjects was implemented.

The respect for human dignity and the right for self-determination was explained to participants as well as providing voluntary consent to participate in the study. Justice or fair treatment and non-discriminatory selection of human subjects was implemented.



## Variables

According to Fain (2004) variables (Table 5) are measurable characteristics that varies among subjects in a study. The independent variable is the variable that is observed, introduced, or manipulated in order to determine the effect it has on another variable (Fain, 2004). In this capstone project, the independent variable is an intervention of the early alert referral program.

The criterion or outcome variable is the dependent variable. It is the variable that is being observed for change or reaction after the treatment or intervention has be applied (Fain, 2004). The dependent variable in the capstone study is nursing student retention rates.

Table 5

### *Study Variables and Types*

<b>Study Variable</b>	<b>Type of Variable</b>
Nursing retention rates	Dependent
Proposed Intervention- Early-Alert Referral Program Self-improvement plan listing reason (s) that may have/has attributed to an academic at-risk status (Proposed Intervention)  Students will list actions they plan to implement to improvement at-risk behaviors. (Proposed intervention)	Independent

**Timeframe**

The capstone project was a consummation of DNP course completion as well as knowledge assimilation. The project addressed a systems problem within the DNP candidate's field of expertise and proposed an evidenced-based intervention that addressed the problem for a significant population (Zaccagnini & White, 2014). The "DNP Project Process Model" was the framework and timeline used for the development, implementation and evaluation of the capstone project (Zaccagnini & White, 2014). The time frame for the capstone is revealed in Appendix B the model has nine steps which starts with recognition of a problem and ends with utilization and reporting of results. The problem recognition phase was initiated during the fall semester 2012. The final utilization and reporting of results was November 2014 with the electronic publication of the capstone project.

**Setting**

The early alert referral program was implemented after regular class hours and to correspond with the schedule of all participating students. The program was held in the chief investigator's office after 3:30 p.m. on regular class days.

**Human Subject's Protection**

According to Fain (2004) human rights protection involves protecting human subjects involved in research from injury, protection of privacy and dignity and the right to anonymity and confidentiality. The primary responsibility of the Institution Review Board (IRB) is to review research proposals at convened meeting to ensure that federal guidelines are followed (Fain, 2004) In addition, IRB provides guidance as well as making sure all studies

are ethical. The DNP candidate completed Collaborative Institutional Training Initiative (CITI) (see Appendix I) a national certification training needed toward the protection of human rights. The training content includes two tracks, one with a biomedical focus, and another designed for the social, behavioral, and educational disciplines, each of which covers the historical development of human subject's protections as well as current information on regulatory and ethical issues. Following CITI training, the sponsoring college and Regis University IRB granted the DNP candidate permission to conduct the study by letter (Appendix J and Appendix K). The Health Careers Chairperson at the sponsoring institution also granted approval for the study to be conducted in the department of nursing among practical nursing students. The benefits of the study were educational interventions which is projected to enhance student success and nursing student retention.

### **Instrumentation and Reliability**

According to Fain (2004) the consistency with which an instrument or test measures whatever it is designed to measure is its reliability. In addition, it is a measure of reproducibility and is an empirical issue. The validity is the accuracy with which a test measures or what an instrument supposed to measure (Fain, 2004). Having clearly defined as well as operationalized goals and objectives is a way to achieve reliability and validity during the research. Moreover, this will decrease any chance of measurement error. Instruments used in this study was the early alert referral check list. The check list was implemented before student admission into the nursing program. Evidence in support of content validity of the early alert referral checklist was established by literature reviews by (Jeffrerys, 2007). Content validity of

the instrument was established by implementation and evaluation of its contents and results by the project investigator and practical nursing division chair who served as a validating expert. Reliability is the consistency with which an instrument or test measures whatever it was designed to measure. The DNP candidate was the only user of the checklist. However, if the instrument were to be used in the future, it would be tested for interrater reliability, meaning that the faculty who validates/ or evaluates the checklist will give the identical judgment consistently.

For the purpose of this capstone project, the convenience sample size were 8 students, which is relatively small. The pre-nursing students represented the exclusion criteria. Relative frequency tables were used to reveal retention rates from summer 2012-2014 (see Table 6).

### **Data Procedure**

According to Kane and Radosevich (2011) statistical measures must be appropriate for data collection in order to minimize any error. The statistical method and study measures that were implemented in the data collection phase included simple descriptive statistics using interval level of measurement. Therefore, data was collected during several intervals during the intervention period June- August 2014 (three months). The Statistical Package for Social Sciences (SPSS) was used for data analysis reporting retention in aggregate form. Microsoft Word was used in designing the frequency tables.

All early alert referral retention data was entered into a chart using Microsoft Word. Three frequency tables were created using retention data from summer 2012 to summer 2014. The first, second and third frequency tables contained the following data: course, level of students, how many enrolled, how many dropped, students who completed the course, failure

and retention rates. The descriptive data analysis was used to report results of the project will be in relative frequency charts.

Table 6

*Retention Tables***Retention Data****Practical Nursing/Summer 2012**

Course	Level	Enrolled	Dropped	Completed/Pass	Fail	Retention Rate
NUR 105	2	7	0	5	2	71%
Adult/Nursing						

**Retention Data****Practical Nursing/Summer 2013**

Course	Level	Enrolled	Dropped	Completed/Pass	Failed	Retention Rate
NUR 105	2	10	1	9	0	90%
Adult/Nursing						

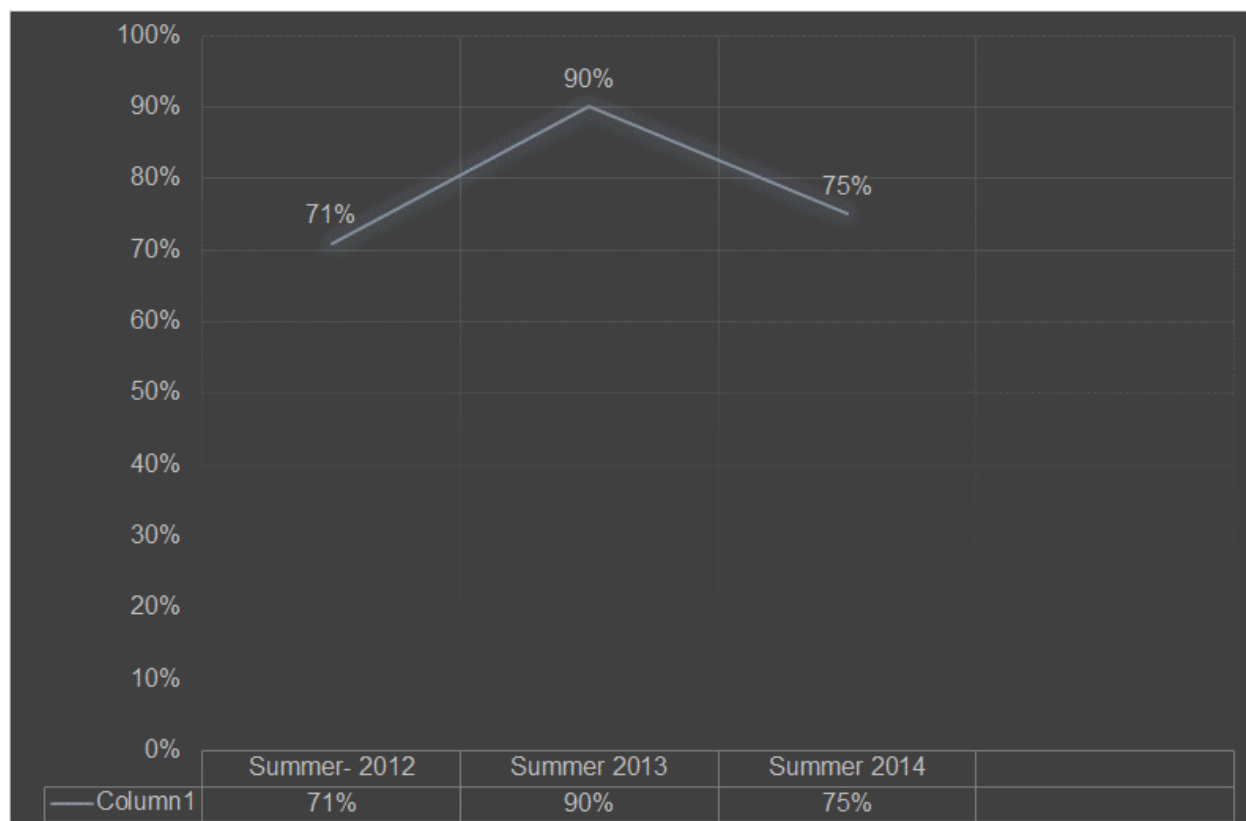
**Retention Data****Practical Nursing/Summer 2014**

Course	Level	Enrolled	Dropped	Completed/Pass	Failed	Retention Rate
NUR 105  Adult Nursing	2	8	1	6	1	75%

**Data Presentation Procedure**

According to Kane and Radosevich (2011) it is essential to make visual data on graphs or tables stand out. Reader attention is averted from too much exploratory data analysis. Data and information that is unnecessary and gratuitous should be avoided. Figures that are included should be horizontal which is more aesthetically pleasing to readers (Kane & Radosevich, 2011). Data collected during the capstone project is depicted in the form of graphs and tables.

Table/Graph 7

*Retention Rates- 2012-2014*

### Project Findings and Results

#### Detailed Statistical Findings from Instrumentation

Data was collected to evaluate the effectiveness of the early alert referral program in terms of retention as a key indicator of academic success among academically at-risk nursing students. A total of eight students participated in the intervention (summer 2014). Three students were identified as academically at-risk. One student dropped the course, one student

failed the course (this student participated in the intervention) and six students passed the course. After implementation of the early alert referral intervention six students passed the course. There was no statistically significant change in the retention rates summer 2014 as compared to the rates from 2012 and 2013.

Even though the capstone intervention did not demonstrate any statistical significance or retention increase, the intervention can be further implemented in subsequent semesters as a strategic tool to enhance retention rates. Likewise, faculty and especially students were very cooperative and excited about the intervention being implemented. Furthermore, the students voiced a sincere appreciation for including them in the intervention. A recommendation for future implementation of the intervention was voiced for approaching semesters.

### **Limitations, Recommendations and Implications for Change**

#### **Limitations**

According to Fain (2004) limitations of a study are aspects that are potentially confounding to the main study variable. There were limitations identified with the capstone project's design. Limitations of the study included a small sample size of students in the intervention and control group which limited generalizability to other settings. Other limitations included: summer semesters are shorter (ten weeks) than spring and fall (fifteen weeks), homogeneity of the study sample (the sample were females the minority student nursing population such as males were underrepresented in the study) and the study's population



represented one geographical region (rural Alabama may not accurately present nursing program throughout the United States)

### **Recommendations**

Application of this capstone project findings has the capability to significantly impact student nursing retention. Recommendations for this capstone include: the need for larger samples, larger faculty integration, and longer time frame to implement the study (one year or three semesters).

### **Practice Implication**

The implications of the capstone project findings has clearly revealed a need for a faculty initiated early alert referral program to increase retention rates among practical nursing students at the sponsoring institution. According to Jeffreys (2012) nursing student retention current and future trends predict a more academically and culturally diverse student nursing population. With this being said, the nursing student persistence, retention and success will be future complicated. The escalating nursing shortage rising health care costs places a high demand on the immediate promotion of student nursing retention and success. Therefore, nurse educators must work collaboratively to expand nursing retention systematically so that the concepts, constructs, and variables are connected together in a comprehensive fashion to increase the academic success rate among nursing students (Jeffreys, 2012).

### **Conclusion**

In this capstone study there was a positive correlation between faculty integration and support and student nursing academic outcomes. Students need to believe that the end result

(academic success) is worth the effort if they just continue to persist and hang on in there. Interactions with faculty and other role models can either increase or decrease academic outcome expectations, depending on whether the interactions perceived by the students are positive or negative. Some of the student comments during the implementation of the project: "Mrs. Gray I am glad that you care." "I am so glad that we were not forgotten." I am pleased to be involved in your project."

Relevant literature reveal that students who persisted and were successful academically perceived greater faculty support. This is consistent with empirical findings in the literature that support faculty integration and student persistence is linked to academic success (Jeffreys, 2007).

Nursing retention rates were studied in nontraditional practical nursing students. This capstone project designed by the DNP candidate allowed for the opportunity to integrate knowledge, evidence-based interventions, established the basis for future scholarly work in the spirit of scholarship and excellence in order to fulfill the graduation requirements. The project also sparked a desire from within the DNP candidate to optimize opportunities to advance student success.

According to Houser and Bokovoy (2006) research is valuable and profound. It allows clinicians to distinguish between truth from error and separate evidence from anecdote and science from myth. Empirical evidence strongly supports and suggest the need for a faculty initiated early alert referral program in a community college setting. It is imperative to have administrative and faculty collaborations and support for the program to succeed along with sufficient planning and evaluation.

The data collected from this capstone project answered the research question: Will an early alert referral program initiated by nursing faculty prevent academic failure and improve retention rates among at-risk nursing students? The conclusion of this capstone project clearly demonstrated that an early alert referral program at the sponsoring institution has the potential to improve retention rates among practical nursing students.

## References

- American Association of Colleges of Nursing (2006). The essentials of doctoral education for advanced nursing practice. Retrieved from <http://www.aacn.nche.edu/publications/positions/DNPessentials.pdf>.
- Abele, C., Penprase, B., & Ternes, (2013). A closer look at academic probation and attrition: What courses are predictive of nursing student success? *Nurse Education Today*, 33, 258-261.
- Beddoe, M., & Murphy. (2004). Does mindfulness decrease stress and foster empathy among nursing students? *Journal of Nursing Education*, 43(7), 305-312.
- Campbell, A., & Dickson, (1996). Predicting student success: A 10 year review using integrative review and meta-analysis. *Journal of Professional Nursing*, 12(1), 47-59.
- Chism, L. (2013). *The doctor of nursing practice. A guidebook for role development and professional issues*. Burlington, MA: Jones and Bartlett.
- Colalillo, G. (2007). Mentoring as a retention strategy in a diverse multicultural, urban associate degree program. *Teaching and Learning in Nursing*, (2), 28-33.
- Davenport, N. (2007). A comprehensive approach to nclex-rn success. *Nursing Education Perspectives*, 28(1) 30-34.
- Fain, J. (2004). *Reading, understanding, and applying nursing research*. (3<sup>rd</sup> Ed). Philadelphia, PA: F.A. Davis.

- Gaynor, L., Gallasch, T., Yorkston, E., & Stewart, S. (2006). Where do all the undergraduate and new graduate nurses go and why? A search for empirical research evidence. *Australian Journal of Advanced Nursing*, 24(2), 26-32.
- Hopkins, T. (2005). Early identification of at-risk nursing students: A student support model. *Journal of Nursing Education*, 47(6), 254-259.
- Houser, J and Bokovoy, (2006). *Clinical research in practice. A guide for the bedside scientist*. Sudbury, MA: Jones and Bartlett.
- Houser, J & Oman, K. (2011). *Evidence-based practice. An implementation guide for healthcare organizations*. Sudbury, MA: Jones and Bartlett.
- Jeffreys, M. (2012). *Nursing student retention: Understanding the process and making a difference*. New York, NY: Springer.
- Jeffreys, M. (2007). Tracking students through program entry, progression, graduation, and licensure: Assessing undergraduate nursing student retention and success. *Nurse Education Today*, 27, 406-441.
- Kane, R. & Radosevich, D. (2011). *Conducting health outcomes research*. Sudbury, MA: Jones and Bartlett.
- McLaughlin, B. (2008). Retention issues: What can we do? *Teaching and Learning in Nursing*, (3), 83-84.
- Melnyk, B. & Fineout-Overholt, E. (2005). *Evidence-based practice in nursing & healthcare. A guide to best practice*, Philadelphia, PA: Lippincott Williams and Wilkins.

- Newton, S., Smith, L., Moore, G., & Magnan, M. (2007). Predicting early academic achievement in baccalaureate nursing program. *Journal of Professional Nursing*, 23(3), 144-149. DOI: 10.1016/j.profnurs.2006.07.001
- Peterson, V. (2009). Predictors of academic success in the first semester baccalaureate nursing students. *Social Behavior and Personality*, 37(3), 411-418.
- Porter, K. (2008). Current trends in student retention: A literature review. *Teaching and Learning in Nursing*, (3), 3-5.
- Ramsburg, L. (2007). Strive for success: A successful retention program for associate of science in nursing. *Teaching and Learning in Nursing*, 7(2), 12-16.
- Reid State Technical College 2013-2016 Catalog, (2014). *Practical nursing program*.  
Evergreen, AL: Reid State Technical College.
- Rose, S. (2011). Academic success of nursing students: Does motivation matter? *Teaching and Learning in Nursing*, 11(6), 181-184
- Rudel, R. (2006). Nontraditional nursing students: The social influences on retention. *Teaching and Learning in Nursing*, (1), 47-54.
- Shelton, E. (2000). Faculty support and student retention. *Journal of Nursing Education*, 42(2) 68-75.
- Stickney, M. (2005). Factors affecting practical nursing student attrition. *Journal of Nursing Education*, 47(9), 422-426.
- Terry, A. (2012). *Clinical research for the doctor of nursing practice*. Sudbury, MA: Jones and Bartlett.

- Wells, M. (2003). An epidemiologic approach to addressing student attrition in nursing programs. *Journal of Professional Nursing, 19*(3), 230-236.
- Williams, M. (2010). Attrition and retention in the nursing major: Understanding persistence in beginning nursing students. *Nursing Education Perspective, 21*(6), 362-366.
- Zaccagnini, M. and White, K. 2014. *The doctor of nursing practice essentials. A new model for advanced practice nursing*. Burlington, MA: Jones and Bartlett.

## Appendix A

## Systematic Review of Literature

Article Title and Journal	<b>Assessing intervention effectiveness for reducing stress in student nurses: quantitative systematic review. <i>Journal of Advanced Nursing</i></b>	<b>A longitudinal cohort study of burnout and attrition in nursing students. <i>Journal of Advanced Nursing</i></b>
Author/Year	Galbraith, N, & Brown, K. (2011)	Dreary, I.J, Watson, R, & Hogston (2002)
Database and keywords	CINAHL/Stress, nursing, intervention, burnout	EBSCO/ nursing students, stress, attrition
Research Design	Quantitative systematic review	Longitudinal cohort survey
Level of Evidence	Level I (Zaccagnini & White, 2011)	Level III (Houser and Oman, 2011)
Study Aim/Purpose	To identify the types of interventions that are effective in reducing stress in student nurses.	Investigate prospectively the determinants of, and relationships among, stress, burnout, and attrition in nursing students
Population/ Sample size Criteria/Power	186 studies identified assessed against inclusion criteria, 17 studies met criteria, quality appraisal conducted. 16 studies included in the final review.	Nursing students mostly females. Cronbach alpha internal consistency levels were done clinical= 0.82, finance 0.83, scores on the factors were positively correlated with all items loaded positively on the first unrotated principal components
Methods /Study Appraisal Synthesis Methods	A theoretical framework of intervention type provided a structure to the analysis of the studies' effectiveness. Robustness and trustworthiness of the analysis were assessed through discussion between authors.	Involved a complete cohort of nursing students employed using a battery of instruments to measure personality, intelligence, psychological, morbidity, stress coping and burnout
Primary Outcome Measures and Results	Interventions which promoted skills to reduce the intensity or number of stressors were successful. Stress interventions did not improve academic performance	The relationship between personality stress, coping, and burnout, considered with that between personality and attrition lead to the conclusion that there is probably not a direct relationship between stress, burnout, and attrition.
Author Conclusions/ Implications of Key Findings	The design of stress interventions should be driven by theory. Future studies should focus on interface and organizational factors and the long-term benefits of interventions for student nurses are yet to be demonstrated.	Stress and burnout and attrition may not directly be linked. Personality factors at course entry may contribute to the prediction of burnout and program completion. The relationships were not strong enough to be useful practically.
Strengths/ Limitations	Future evaluations should aim at designing interventions in accordance with a theoretical model.	Measurement of attrition the small number of males and the fact that there were different programs within the program. The attrition problem itself is only a feature of the longitudinal designs.
Funding Source	None	None
Comments	None	None



Article Title and Journal	Faculty Support and Student Retention. <i>Journal of Nursing Education</i>	Where do all the under graduated and new graduate nurses go and why. A search for empirical research evidence. Australian Journal of Advance Nursing.
Author/Year	Shelton, E. (2003)	Gaynor, L., Gallasch, T., Yorkston, E., Stewart, S., & Turner, C. (2006).
Database and Keywords	Google Scholar/retention, nursing students	Medline/ attrition, retention, undergraduate,
Research Design	Cross-sectional-Evidence from systematic reviews of descriptive and qualitative studies.	Cross- sectional case control prospective cohort study.
Level of Evidence	Level V (Houser and Oman, 2011)	Level VI (Houser and Oman, 2011)
Study Aim/Purpose	Prove a relationship between perceived faculty support and student retention among nursing students	Examining factors associated with the attrition of undergraduate nursing students in pre-registration programs and the retention of graduate nurses in the workforce.
Population Studied/Sample Size/Criteria/ Power	The sample was (N=458) was obtained from nine nursing programs in New York and Pennsylvania. 89% women, age ranges 18-54.	Students in pre-registration nursing programs or registered nurses in their graduate year.
Methods/Study Appraisal/ Synthesis Methods	The Perceived Faculty Support Scale was used to measure students' perceptions of the support received from faculty while in the nursing program. Internal consistency reliability for the Perceived Support Scale was .92 as measured by Cronbach's alpha coefficient in a pilot study of 22 nontraditional students.	Three authors who were guided by a standardized procedure performed data extraction and quality assessment independently. Synthesis of the data appears in text and tabulate format. Meta-analysis was not possible.
Primary Outcome Measures and Results	Perceived faculty support as measured by the Perceived Faculty Support Scale had total possible scores of 24-120	Review found only 4 studies that met all inclusion criteria. The studies examined attrition as an outcome with two studies reporting a range of 25-27% attrition within the first year. No studies were found that quantified or examined retention of new graduates as an outcome.
Author Conclusions/ Implications of Key Findings	Empirical evidence reveal that both psychological and functional support contribute to student retention by promoting student persistence. Nursing faculty must extend the holistic approach toward the nurturing of student nurses	There is a need to systematically track undergraduates and new graduates to quantify and understand attrition, retention and workforce choices within the nursing profession and begin to build from the evidence-base.
Strengths/ Limitations	Cross-sectional design method data from all student enrolled and who withdrew was not included. Questionnaires were not returned in a timely manner.	Lack of external validity and generalizability due to the comparison between responders and non-responders with the follow-up of only one semester being too short to ascertain attrition rates.
Funding Source	None	None
Comments	The search address the psychological aspect of capstone project.	Study address and relates to intervention of interest (PICO)of capstone project

Article Title and Journal	A systematic review of placement-related attrition in nurse education. <i>International Journal of Nursing Studies</i> .	An integrative literature review of student retention in programs of nursing and midwifery education: why do students stay? <i>Journal of Clinical Nursing</i> .
Author/Year	Eick, S., Williamson, G., & Heath, V. (2011)	Cameron, J., Roxburgh, M., Taylor, J., & Lauder, W. (2010)
Database and keywords	<b>Medline/attrition, student nurse, systematic review</b>	EBSCO/retention, nursing students
Research Design	Systematic Review	Integrative literature review
Level of Evidence	Level I (Houser and Oman, 2011)	Level C (Houser and Oman, 2011)
Study Aim/Purpose	To establish nursing students' placement related reasons for leaving their program.	Identify student characteristics and strategies in research studies by investigating retention as opposed to attrition nursing programs.
Population/ Sample size Criteria/Power	Undergraduate nursing students who left the nursing program, considered leaving or who had peers who had left adult, child, and mental health and learning disability fields of nursing.	Students undertaking programs of nursing education preparing them for professional registration.
Methods /Study Appraisal Synthesis Methods	Quantitative and qualitative research investigating student nurse attrition, with an emphasis on placement-related issues. After a systematic selection process.	15 articles were identified and reviewed. The critical appraisal tools produced by CASP (2009) were used to evaluate the quality of the data. Findings from the identified research literature were analyzed using qualitative content analysis.
Primary Outcome Measures and Results	Eighteen studies were included in the review investigated personal reasons for leaving, demographic factors, and student's attributes. Student attrition-no single reason why students chose to leave.	Two broad themes emerged from the analysis: program and personal. Why they stay: profession, support, student characteristics and family.
Author Conclusions/ Implications of Key Findings	Need for more high quality reporting in the area of attrition in student nursing,	Nursing student retention is a professional problem. Collaboration between clinical placement providers, academic institutions, students, and their families is required to address the issue. Illumination of factors that help students stay may help devise interventions that prevent future students from leaving.
Strengths/ Limitations	Study was focused on placement related attrition, only 33 studies meeting the criteria for review and only 18 papers were sufficient quality for review. The review was biased due to being limited to English language studies.	Stringent inclusion and exclusion criteria, including exclusion of papers focusing on progression
Funding Source	Center of Excellence in Professional Learning , Faculty of Health	Study designs: JC, MR, JT, WL, data collection and analysis, JC, MR
Comments	Relevant data to capstone project (PICO)	None

Article Title and Journal	The role of personality and self-efficacy in the selection and retention of successful nursing students: a longitudinal study. <i>Journal of Advanced Nursing.</i>	Diversity, attrition and transition into nursing. <i>Journal of Advanced Nursing.</i>
Author/Year	McLaughlin, K., Moutray M. & Muldoon, O.T. (2008)	Mulholland, J., Anion, E., Atkins, R., Tappern, M., & Franks, P. (2008)
Database and keywords	CINAHL/attrition, nursing students	CINAHL/ student attrition
Research Design	Longitudinal Study	Longitudinal Cohort Design
Level of Evidence	Level IV (Houser and Oman, 2011)	Level IV (Houser and Oman, 2011)
Study Aim/Purpose	Examine the role of personality and self-efficacy in predicting academic performance and attrition in nursing students.	Explore the relationship between selected diversity variables and nursing students' progression and attrition.
Population/ Sample size Criteria/Power	Convenience sample 384 nursing students; 350 female and 34 male	The data were derived from the records of 2530 preregistration students at one university who joined the preregistration nursing program.
Methods /Study Appraisal Synthesis Methods	A questionnaire was implemented which included measures of personality and occupational and academic self-efficacy	A longitudinal cohort design was used. Data was collected from 2003 to 2005 from routinely collected data in student records.
Primary Outcome Measures and Results	Individuals who scored higher on a psychoticism scale were more likely to withdraw from the program. Occupational self-efficacy was revealed to be a statistically significant predictor of final mark obtained. Extraversion was shown to negatively predict academic performance.	Males had lower odds of completing the program than females as did younger students. Those at all qualification levels had similar odds of completion, except students already qualified at degree level who were less likely to complete.
Author Conclusions/ Implications of Key Findings	More research is needed to explore the attributes of successful nursing students and the potential contribution of psychological profiling to a more effective selection process.	Further national and international research is needed to understand better the causal variables underpinning differential attrition rates, with particular regard to understanding how different groups may experience the relationship between education and their broader circumstances and between the theoretical and the clinical elements of nurse education itself.
Strengths/ Limitations	Research would have benefited if qualitative information would have been included. The study focused on students from one particular program instead including students from other programs.	Inability to generate additional data, or to supplement the project with a qualitative dimension limited the depth and explanatory potential of findings. Data was also collected and analyzed on designated sex with a consequent inability to explore the social, political and economic dimensions of sexual difference through the more meaningful category of gender. The small sample size limited the power of analyses of reasons for non-completion.
Funding Source	None	Positively Diverse, NHS Employers, Department of Health
Comments	None	None

Article Title and Journal	Why do nursing students who consider leaving stay on their courses? <i>Nurse Researcher</i>	Nurse education: factors associated with attrition. <i>Journal of Advanced Nursing</i> .
Author/Year	Bowden, J. (2008)	Prymachuk, S., Easton, K., & Little wood, A. (2008)
Database and keywords	CINAHL/ student retention	CINAHL/ age, attrition
Research Design	Case study qualitative methodology	Cohort study
Level of Evidence	Level IV (Houser and Oman, 2011)	Level IV (Houser and Oman, 2011)
Study Aim/Purpose	To show the experiences of nursing students who consider leaving but who stay with the course.	To identify the factors having an impact on student completion rates in a preregistration program.
Population/ Sample size Criteria/Power	Nursing students who completed their pre-registration program and were eligible for inclusion for one phase of the project	Data was available four Diploma of Higher Education cohorts: 1259 students who commenced their studies between the summer of 2002 and autumn 2003 and those who completed by 2006.
Methods /Study Appraisal Synthesis Methods	The project conducted in two phases using questionnaires and interviews.	A retrospective cohort study was conducted using routinely collected demographic and completion data on four cohorts of nursing students at a university.
Primary Outcome Measures and Results	46 of the 93 postal questionnaires were returned (49%). These responses demonstrated a high level of satisfaction with the program.	Findings were related to age and qualifications on entry which were the only two factors available to predict completion in the regression analysis.
Author Conclusions/ Implications of Key Findings	The success that institutions have in supporting struggling or distressed students is arguably a more accurate reflection of the institution's practices and procedures. Institutions are highly accountable for student attrition, but students must share in the responsibility.	To improve attrition rates on preregistration nursing programs higher education institutions should actively target recruitment at mature candidates, increase the level of qualification required to gain entry, examine course structures for flexibility and provide multi-level student support.
Strengths/ Limitations	Project was of a small scale and was conducted in one institution by a lone researcher. The project only captured data from one ethnic group from a very diverse study body. The return rate of 49% from the initial questionnaire was also a limitation.	The main limitation of retrospective studies-and undoubtedly a limitation is that a predetermined data set was available and it is impossible and too expensive to go back to participants and collect further data. Completion and non-completion data was limited and only a single sample from a single geographical area was collected.
Funding Source	None	None
Comments	Student attrition relevant to capstone project.	None

Article Title and Journal	Nontraditional nursing students: The social influences on retention. <i>Teaching and Learning in Nursing</i> .	Factors for attrition in an accelerated baccalaureate nursing program. <i>Journal of Nursing Education</i> .
Author/Year	Rudel, R. (2006).	Rouse, S. (2010).
Database and keywords	Science Direct Freedom Collection/retention	CINAHL/attrition
Research Design	Phenomenological study	Descriptive Study
Level of Evidence	Level VI (Houser and Oman, 2011)	Level VI (Houser and Oman)
Study Aim/Purpose	Understand the nontraditional student's experience in nursing education to further describe the phenomenon of retention.	Examines the reasons why student leave an accelerated baccalaureate nursing program.
Population/ Sample size Criteria/Power	12 non-traditional nursing students-females >24 years of age	The size if the sample for the study included two cohorts of BA/BS To-BSN students (n=39)
Methods /Study Appraisal Synthesis Methods	The study was informed by phenomenology according to Max van Manen who portrayed and worked within the context of "Phenomenology of practice.	Archival data were reviewed including demographic and admission records on the first two cohorts. Exit interviews with students who left the program or otherwise did not graduate with their cohort were reviewed.
Primary Outcome Measures and Results	From the experiences and voices of non-traditional students patterns related to retention were: 1) social support from spouse or significant other 2) Peer support 3) other social systems.	Cohort one and two the reasons students did not graduate on time varied (n=16). 5% academic dismissal, (5%) changed majors, (2%) undisclosed personal reasons, (2%) converted to part-time. The rest (58%) remained in the program.
Author Conclusions/ Implications of Key Findings	The sum and substance of the study is that despite best attempts not every non-traditional nursing student has the essential social structure to achieve the goal of degree completion.	Implementation of the interventions discussed may assist programs in retaining a higher percentage of their accelerated degree students and increase the numbers of nurses during the nurse shortage. The study was a starting point in developing the knowledge needed to predict attrition among accelerated degree nursing students.
Strengths/ Limitations	Current research in the area of nontraditional nursing student's persistence is warranted because information from current literature regarding this is limited.	The study focused only on two cohorts of students from one school. More studies need to be conducted on this student population to identify reasons for leaving and to develop effective interventions for decreasing attrition.
Funding Source	None	None
Comments	Has some applicability to capstone	Beneficial information relates to and describes capstone population.

Article/Title/Journal	Attrition and Retention in the Nursing Major: understanding persistence in beginning nursing students. <i>Nursing Education Research</i> .	Supporting nursing students who fail: a review of lecturers' practice. <i>Nurse Education in Practice</i> .
Author/Year	Williams, M. (2010)	Litchfield, J. (2001)
Database and keywords	CINAHL/attrition, retention	EBSCO/academic failure, nursing students
Research Design	Report of expert opinions	Qualitative Study
Level of Evidence	Level VII (Houser and Oman, 2011)	Level III (Houser and Oman, 2011).
Study Aim/Purpose	Address and uncover factors that influence student persistence and address attrition on beginning students.	Establish whether there was consistency in the way that lecturers within the same department managed failure.
Population/ Sample size Criteria/Power	Nursing students enrolled in a small single-purposed college who has completed specific first or second level nursing courses. Criteria for inclusion included successful of specific courses and willingness and ability to participate.	Five nurse lecturers from a range of clinical backgrounds.
Methods /Study Appraisal Synthesis Methods	Purposive sample of 10 persisting students were interviewed at the end of the academic year	A semi-structured interview was employed to gather data from respondents, incorporating both open-ended and closed questions formulated with reference to the literature review.
Primary Outcome Measures and Results	The interviews revealed common experiences and practices that helped students belong, persist and flourish during their first two years of baccalaureate education.	There was inconsistency in the way that academic support was provided to students who failure.
Author Conclusions/ Implications of Key Findings	Positive mindset is important, connection with family and resources, faculty working towards creating strategies within courses to foster student-to student connections and creation of a career visions.	The study suggested that schools of nursing may need to produce specific protocols addressing the area of student support and the management of student failure. Too diverse of an approach in relation to managing student's academic failure could result in students appealing against the support process.
Strengths/ Limitations	Findings from the study reflect experiences of students on one campus. Multisite research study would have beneficial.	Small sample obtained for the study. It can be seen that the area of student support for those who fail is very subjective and individualized.
Funding Source	National League for Nursing Small Grant Award, Pi Chapter of Sigma Theta	None
Comments	None	None

Article Title and Journal	Nontraditional students' perceptions of variables influencing retention. <i>Nurse Educator</i> .	Tracking students through program entry, progression, graduation and licensure: assessing undergraduate nursing student retention and success. <i>Nurse Education Today</i> .
Author/Year	Jeffreys, M. (2007)	Jeffreys, M. (2006)
Database and keywords	EBSCO/retention	EBSCO/nursing student, attrition, retention
Research Design	Evidence obtained from a qualitative study.	Retrospective evaluation study
Level of Evidence	Level VI (Houser and Oman, 2011)	Level IV (Houser and Oman, 2011)
Study Aim/Purpose	Gain further insight into students' perceptions concerning factors that restricted or supported retention.	Assess the entry, progression, graduation, and licensure characteristics of associate degree nursing students beginning on entry into the first clinical nursing course.
Population/ Sample size Criteria/Power	Nontraditional students (n=1,156)	112 individuals who were predominately female (n= 93; 83%) and white (n=59; 53%); other represented ethnic groups included: Asian (9%), Black (23%), Hispanic (11%) and other (4%).
Methods /Study Appraisal Synthesis Methods	Consenting students completed the Student Perception Appraisal -Revised and the demographic sheet anonymously while the instructors stepped out of the classroom.	Student profile characteristics and academic outcomes available via student transcript records, college graduation records, admission records and other demographic records were obtained.
Primary Outcome Measures and Results	Data were analyzed and collapsed to report aggregate findings. Factor analysis yielded 5 factors: environmental factors, institutional interaction and integration factors, personal academic factors, college academic facilities, and friend support. Demographic and student characteristics were examined in relation to student perceptions.	The retention trajectory was distributed between ideal (26%). Descriptive and inferential analysis suggested several variables that influenced first time pass rate on the nursing licensing exam: course grades in three nursing courses, number of nursing withdrawals or failure and nursing course average.
Author Conclusions/ Implications of Key Findings	The nontraditional students perceived environmental factors to be most influential in supporting or restricting retention followed by institutional interaction and integration factors. Nurse educators must continue to expand the teaching role into a mentor role, create positive family-faculty friend networks, and assist students with realistic self-appraisal.	The academic composite of successful students included; at least a B grade in ms1 (b) no withdrawal of failure in any nursing course and c: a NCGA of at least a B. Future research replicating this study will enhance the confidence with which nurse educators may use academic indicators to identify at-risk students and or predict success.
Strengths/ Limitations	Additional studies are needed to replicate findings and further explore professional integration factors.	Further investigation is needed before a definitive conclusion about academic entry characteristics.
Funding Source	Postdoctoral Research Fellowship Award from Nursing Education Alumni Association.	None
Comments	Nurse educators are in a great position to positively influence student retention through the design, implementation and evaluation of conceptually and empirically based strategies.	None

Article Title and Journal	<b>Does mindfulness decrease stress and foster empathy among nursing students? <i>Journal of Nursing Education</i>.</b>	<b>A longitudinal study of perceived level of stress, coping and self-esteem of undergraduate nursing students: an Australian case study. <i>Journal of Advanced Nursing</i>.</b>
Author/Year	Beddoe, A. & Murphy, S. (2004)	Lo, R. (2002)
Database and keywords	EBSCO/stress among nursing students	EBSCO/stress, nursing students
Research Design	Pilot Study	Longitudinal Study
Level of Evidence	Level V (Houser and Oman, 2011)	Level III (Houser and Oman)
Study Aim/Purpose	Explore the effects of an 8-week mindfulness-based stress reduction course on stress and empathy.	Investigate the perception and sources of stress coping mechanisms used, and self-esteem in nursing students during 3 years of their undergraduate nursing program.
Population/ Sample size Criteria/Power	23 nursing students volunteered for the course; 18 students completed the course- 16 completed both pretest and post test	Cohort of nursing student going through 3 years of a nursing program
Methods /Study Appraisal Synthesis Methods	Study used a pre-test-post-test design without a control group. The 8-week researcher-led mindfulness course followed MBSR guidelines. In the weekly sessions, mindfulness was taught sequentially so participants could discover relationships between mindful practice and their ability to cope more effectively with stress.	Descriptive correlational design using a questionnaire which consisted of demographic data, the General Health Questionnaire, self-esteem scale, and the modified Ways of Coping Scale.
	63% participants reported changes in their relationship to thought and feelings and their reactions to them, 75% reported greater self-confidence, 88% indicated they were more helpful and 69% reported they were more assertive.	Students in year 1 experienced significantly less transient stress as compared with 2 year students in year 3 had more positive self-esteem than year 2 students. No significant differences with regard to chronic stress, avoidance and proactive coping and negative self-esteem.
Author Conclusions/ Implications of Key Findings	Being mindful may reduce anxiety and decrease tendencies to take on others' negative emotions. When students use mindfulness to quiet their minds, bodies and emotions, they may be better able to reach out to distressed clients and respond with concern.	Curriculum structure examination, student orientation programs, stress management training are a few implications that should be considered during curriculum planning in nursing education.
Strengths/ Limitations	Self- selected sample, absence of a control group, a single site location, a 22% course attrition rate and another 8% without a pre-test post-test matches	Small sample size precludes generalization beyond the study population. The study looked at only selected characteristics of the individual and the environment.
Funding Source	None	None
Comments	None	Stress may be a factor to consider for attrition of nursing students.



Article Title and Journal	<b>Faculty support and student retention. <i>Journal of Nursing Education.</i></b>	<b>Effectiveness of student admission essays in identifying attrition. <i>Nurse Education Today.</i></b>
Author/Year	Shelton, E. (2000)	Sadler, J.(2003)
Database and keywords	EBSCO/nursing student retention	EBSCO/attrition, nursing students
Research Design	Cross-sectional case study	Longitudinal Study
Level of Evidence	Level VI (Houser and Oman, 2011)	Level IV (Houser and Oman, 2011)
Study Aim/Purpose	Explore the relationship between nursing students' perceived faculty support and nursing student retention.	Essays are one such mechanism used to gather data for admission decisions.
Population/ Sample size Criteria/Power	458 associate degree nursing students	236 students from a baccalaureate nursing program
Methods /Study Appraisal Synthesis Methods	The Perceived Faculty support scale was used to measure students' perceptions of the support received from faculty in their nursing program. The scale is a 5 point Likert scale consisting of 24 items. In the full scale study of 458 subjects reliability was found to be excellent, with internal consistency of .96 as measured by Cronbach's alpha. Item to total correlations were all positive and acceptable and ranged from .52 to .79.	Data was analyzed for differences between students who completed the program (completers n=193) and those who dropped out (non-completers, n=43). T-test between the group mean essay score revealed statistical difference ( $t=2.092$ , $p=0.043$ ) while there was no statistical difference ( $t=0.22$ , $p=ns$ ) between the mean admission GPAs of the groups.
Primary Outcome Measures and Results	Perceived faculty support, as measured by the Perceived Faculty Support Scale had total possible scores of 24 to 120 with a midpoint of 72.	The correlation between grade point average and the mean essay scores for the completers was slightly higher and significant ( $r=0.28$ , $p<0.01$ ) than the non-completer ( $r=0.26$ , $p=ns$ )
Author Conclusions/ Implications of Key Findings	Empirical evidence that both psychological and functional support contribute to student retention by promoting student persistence.	Grade point average on admission does not indicate attrition, nor does score alone on an admission essay
Strengths/ Limitations	Cross-sectional design and the return rate of the questionnaires.	Inclusion of essays and transfer questionnaires written by students seeking application to one nursing program only
Funding Source	None	None
Comments	Very thought provoking and relevant to Capstone.	None

Article Title and Journal	<b>Spiritual health, clinical practice stress, depressive tendency and health -promoting behaviors among nursing students. <i>Journal of Advanced Nursing</i>.</b>	<b>Factors related to progression and graduation rates for rn-to-bachelor of science in nursing programs: searching for realistic benchmarks.</b>
Author/Year	Hsiao, Y., Chien, L., Wu, L., Chang, C., & Huang, S. (2010)	Robertson, S., Canary, C., Orr, M., Herberg, P., & Rutledge, D. (2010)
Database and keywords	CINAHL/stress nursing students	EBSCO/student success
Research Design	Cross-sectional design	Evidence obtained from expert opinion, regulatory opinions and reports of expert committees
Level of Evidence	Level VII	Level VII
Study Aim/Purpose	Exploration of the association of spiritual health with clinical practice stress, depressive tendency and health promoting behaviors.	Measurement and analysis of progression and graduation rates
Population/ Sample size Criteria/Power	1276 nursing student with an average age of 20:1 years (SD =1.6 years)	3 part survey was designed with 5 questions. The progression/graduation success section ask definitions of retention/attrition, estimates of annual retention rates and graduation rates.
Methods /Study Appraisal Synthesis Methods	A cross sectional design was adopted and structured questionnaires were used for data collection	Survey was sent to 35 nursing programs (RN-to-BSN programs) in California. Final sample of potential program respondents was 31 schools.
Primary Outcome Measures and Results	Spiritual health was negatively associated with clinical practice stress ( $r=-0.211$ , $P < 0.001$ ) and depressive tendency ( $r=0.324$ , $P < 0.001$ ) and positively associated with health promoting behaviors.	14% response rate representing California universities that have a RN-to-BSN program
Author Conclusions/ Implications of Key Findings	Educators should develop strategies to address nursing students' spiritual health. This may help nursing students to manage their stress, to reduce depressive symptoms and to enhance health promoting behaviors	Setting standards for progression and graduation rates for RN-to-BSN programs should be based upon real context of the learner's environment and the best evidence about how this population of nurses progress toward graduation.
Strengths/ Limitations	Cross sectional design does not allow causative conclusions to be drawn, generalizability of the results is limits	Longitudinal studies using data from multiple schools would be helpful in determining realistic and feasible benchmarks for success.
Funding Source	National Science Council, Taiwan for funding	None
Comments	None	None

Article Title and Journal	<b>Why do student nurses leave? Suggestions from a Delphi study. <i>Nurse Education Today</i></b>	<b>Academic success, clinical failure: struggling practices of a failing student. <i>Journal of Nursing Education</i>.</b>
Author/Year	Last, L. (2003)	McGregor, A. (2005)
Database and keywords	CINAHL/attrition nursing students	CINAHL/at-risk nursing students
Research Design	Qualitative Study	Qualitative ethnographic study
Level of Evidence	Level VI (Houser and Oman, 2011).	Level V (Houser and Oman, 2011)
Study Aim/Purpose	Establish a consensus view of the reasons student nurses leave their pre-registration	Why failure a socially constructed phenomenon, matters to nursing?
Population/ Sample size Criteria/Power	Si voluntary student nurses representing all three years of the preregistration program.	9 nursing students who were randomly selected from three student groups whose academic standing was assessed by nursing faculty?
Methods /Study Appraisal Synthesis Methods	The first phase of the study was exploratory employing a broad qualitative approach using focus groups and semi-structured one to one interviews	Interview with students three times during the academic year with use of open coding process and standard qualitative research methodology, 10 central themes emerged from analysis of student interviews.
Primary Outcome Measures and Results	The majority of students (85%) believed that they had not acquired the necessary knowledge and skills to become a staff nurse by the end of their training due to a perceived imbalance between theory and practice.	Convergences and contradictions were uncovered, a portrait of how success and failure are navigated and managed from the students' and institutions' perspectives.
Author Conclusions/ Implications of Key Findings	Trusts should develop culture where ward leaders are positive and supportive of learners in practice and some studies have suggested that a high quality experience can contribute to increasing retention.	Nurse educators need to be fully present with students who are at risk of failing clinical courses in ways that foster personal and professional growth, rather than distance themselves.
Strengths/ Limitations	Due to ethical considerations it was not possible to elicit the views of e-students, and it cannot be assumed that the consensus opinions obtained from current student nurses are congruent.	Individual example was used, students were chosen by nursing faculty.
Funding Source	None	None
Comments	Information relevant to capstone project	None

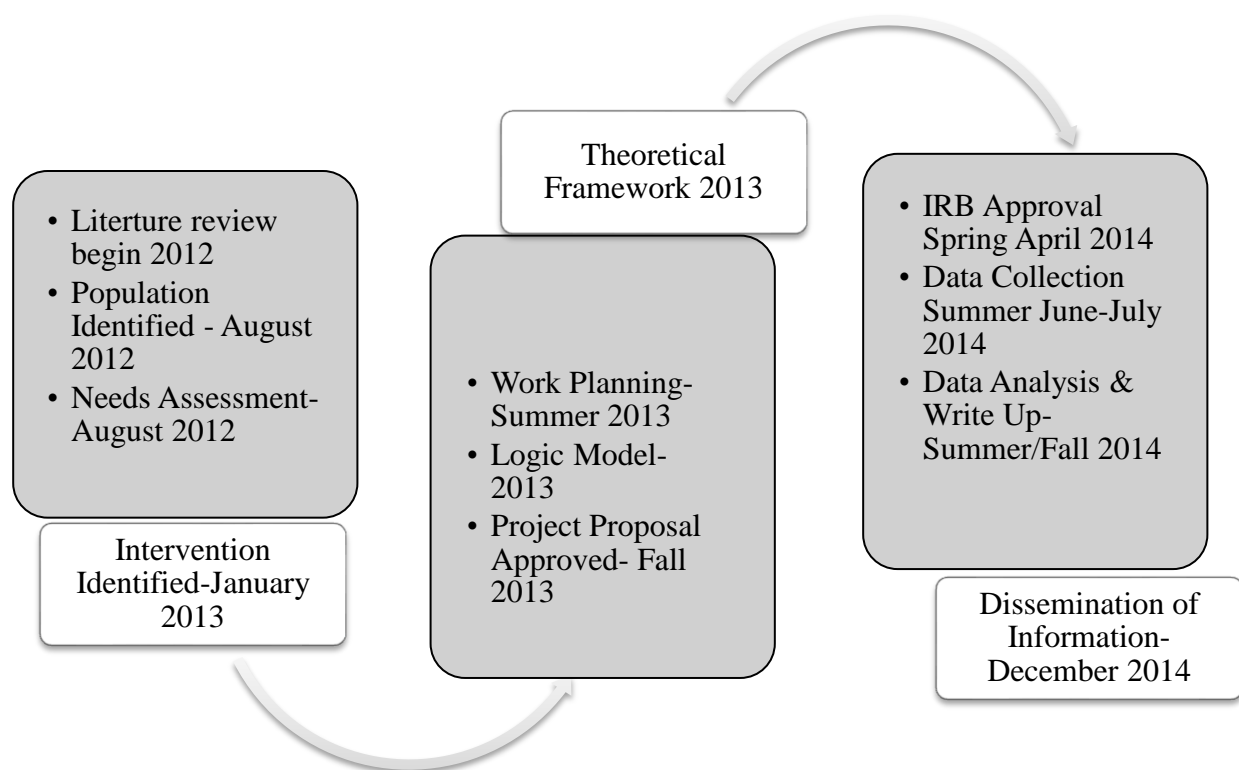
Article Title and Journal	<b>Factors influencing nursing student's academic and clinical performance and attrition: an integrative literature review.</b> <i>Nurse Education Today.</i>	<b>A closer look at academic probation and attrition: what courses are predictive of nursing student success?</b> <i>Nurse Education Today</i>
Author/Year	Pitt, V., Powis, D., Levitt-Jones, T., & Hunter, S. (2012)	Abele, C., Penprase, B., & Ternes, R. (2013)
Database and keywords	CINAHL, MEDLINE, Science Direct/attrition, nursing	Science Direct/retention, nursing education
Research Design	Quantitative, Qualitative Integrative Literature Review	Exploratory Retrospective Study
Level of Evidence	Level V (Houser and Oman, 2011).	Level IV (Houser and Oman, 2011)
Study Aim/Purpose	Identify factors that influence academic performance, clinical performance and attrition in pre-registration education.	Identify courses (both pre-requisites and nursing courses) that could predict student success in completing the baccalaureate nursing program.
Population/ Sample size Criteria/Power	1999 students	327 students placed on probation or dismissed from a Midwest school of nursing between 2002-2010.
Methods /Study Appraisal Synthesis Methods	Inclusion criteria were: data collected from 1999 onward undergraduate pre-registration nursing students: Excluded studies upper division programs enrolled/licensed practical nursing programs, descriptive papers	Students records provided data of courses failures, age, gender, ethnicity, program type, and successful completion of the program most common courses: BIO-307 (Intro to Human Microbiology, PSY 225 (Intro to Lifespan Development of Psychology, NRS 227-Pathophysiology, NRS 326 Acute Care I.
Primary Outcome Measures and Results	2462 potentially relevant papers of these 34 were doctoral dissertation. 2279 were excluded based on the inclusion/exclusion criteria and repetition.	Students PSY 225 grades increases so too to the odds that the student will complete the program. As students fail more courses, they successfully complete the program at much lower rates than students with fewer course failures.
Author Conclusions/ Implications of Key Findings	Students' academic performance is affected by many factors (age, gender). Data show that attrition is related to age, gender, admission qualifications, and science course performance through the program, critical thinking skills, support seeking and academic engagement.	The significance of understanding students' academic performance in courses not commonly viewed as predictive of student success within nursing programs.
Strengths/ Limitations	Heterogeneity evidence in the sample populations of the studies reviewed. Studies included associate diploma and baccalaureate programs of various lengths and content from range of countries	Limit generalizability of the results. Study was conducted at one school of nursing. Sample limited to students who were on academic probation.
Funding Source	None	None
Comments	None	Relevant and applicable to capstone PICO

Article Title and Journal	<b>Predictors of academic success in first semester baccalaureate nursing students.</b> <i>Social Behavior and Personality.</i>	<b>Supportive counselling programme for nursing students experiencing academic failure: randomized controlled trial.</b> <i>Journal of Advanced Nursing.</i>
Author/Year	Peterson, A. (2009)	Peyrovi, H., Parvizy, s. & Haghani H. (2009)
Database and keywords	EBSCO/ attrition, academic success	EBSCO/nursing students, retention
Research Design	Descriptive Correlational Design	Randomized Controlled Trial
Level of Evidence	Level IV (Houser and Oman, 2011).	Level 1 (Houser and Oman, 2011).
Study Aim/Purpose	To determine whether self-esteem, self-efficacy, and environmental variables are predictors of student attrition in first -semester baccalaureate nursing students.	Examining the effects of a supportive counseling program on the academic performance of nursing students experiencing academic failure.
Population/ Sample size Criteria/Power	Non-probability convenience sample of 66 first semester baccalaureate nursing students.	42 Bachelor of science nursing students
Methods /Study Appraisal Synthesis Methods	Self-esteem was measured using the Rosenberg Self-esteem scale. Self-efficacy was measured using the General Self-Efficacy Scale	Data was collected over 12 months from 2006-2007. They were randomly allocated to receive either supportive or ordinary counselling. The mean grades in basic theoretical courses, special courses and also the combination of both basic and special courses was compared between the two groups.
Primary Outcome Measures and Results	An effect size of 0.50 was used for this investigation. Power analysis revealed that 50 participants were needed for this study when $\alpha = 0.05$ , one-tailed, and $\alpha = 0.10$ , two tailed, effect size was 0.50. The Pearson's r was used to assess the direction and strength of the relationship between past academic performance and academic success in the first semester of the program. There was a statistically significant, positive correlation between the variables ( $r = .514$ , $p < .01$ ). The correlation coefficients indicated that there was no significant relation between self-esteem and academic success ( $r = -.022$ ), or self-efficacy and academic success ( $r = -.025$ ).	Over the study period, there were improvements in the mean grades of special courses and also in both basic and special courses of male students in the experimental group, compared with those of male students in the control group (0.27 against -1.43, $P = 0.014$ ; and 1.87 against -0.40, $P = 0.009$ ; respectively).
Author Conclusions/ Implications of Key Findings	In the study, almost half of the students could not continue full-time after the first semester. Self-esteem and self-efficacy had no significant relationship to academic success. Given these findings, evaluating admission criteria and counseling students identified as being high risk for failure to register part-time instead of full-time may be beneficial.	A supportive counselling program can improve the academic performance of male nursing students. The interest of nursing students in special courses can be used as a powerful motivating factor in improving their academic improvement.
Strengths/ Limitations	The univariate approach does not provide valuable information on specific variables. Multivariate approach is necessary to increase the understanding of the complexity of student attrition rates.	Time restriction, psychological states of the students during counselling, students' disinterest in participating in the study which lead to a small sample size are all limitations of the study.
Funding Source	None	

Article Title and Journal	<b>Factors affecting practical nursing student attrition. <i>Journal of Nursing Education</i>.</b>	<b>Predicting student success: a 10-year review using integrative review and meta-analysis. <i>Journal of Professional Nursing</i></b>
Author/Year	Stickney, M. (2008)	Campbell, A., & Dickson, C. (1996)
Database and keywords	EBSCO/practical nursing, attrition	EBSCO/attrition
Research Design	Longitudinal (cross-sectional )	Meta-Analysis
Level of Evidence	Level IV (Houser and Oman,2011)	Level 1 (Houser and Oman)
Study Aim/Purpose	Investigation of factors that affect student attrition in a practical nursing program.	Describe and evaluate nursing education research on predictors of retention and graduation
Population/ Sample size Criteria/Power	153 students from a community college in Florida from 1998-2000. Half the students were from minority populations and the average age was 34 years.	The sample size for the study corpus ranged from 16 to 565 subjects.
Methods /Study Appraisal Synthesis Methods	Both demographic and academic variables that may contribute to student success or attrition in practical nursing program .	Methodological characteristics included publication date and form, source derivation, number of authors, funding for the study, design, sampling methods and sample size.. The substantive characteristics were amended to include student variable such as predictors (preadmission tests, GPAs nursing theory grades, nursing clinical grades, NLN achievement tests, assessment test)
Primary Outcome Measures and Results	The overall attrition rate for the study participants was 36.6%. Descriptive differences for the demographic variables of gender, age, and race were determined by conducting a cross-tabulation analysis. Analysis of the academic variables for grades in prerequisite courses and all sections of the TABE using the t test for independent groups revealed differences between the retention and attrition groups.	Integrative review showed grade point averages in nursing and science courses as the greatest cognitive predictors of student success and parental education and age as the greatest demographic predictors. The meta-analysis portion of the study showed significant effectiveness of interventions used the experimental students. The Fail Safe N (NFS) was used to assess the comprehensiveness and exhaustiveness of the literatures searches.
Strengths/ Limitations	Study was focused on students in one practical nursing program in Florida. All of the factors that may have affected the attrition for each of the students from this one nursing program were not included.	The quality of the study scores were high but were most often affected by not reporting the use of a conceptual framework, operational definitions and validity and reliability of instruments. Also the study failed to address threats to validity such as how to extract and record specific information from student records and telephone interview
Funding Source	None	None
Comments	Useful for capstone project and PICO.	The study concludes that before nursing student students seek admission to the nursing program, completion of liberal arts, science and other support courses will be beneficial. Interventions should be designed to increase student success at the pre-nursing level

*Appendix B*

## Early Alert Referral Program Time-Line



*Appendix C*

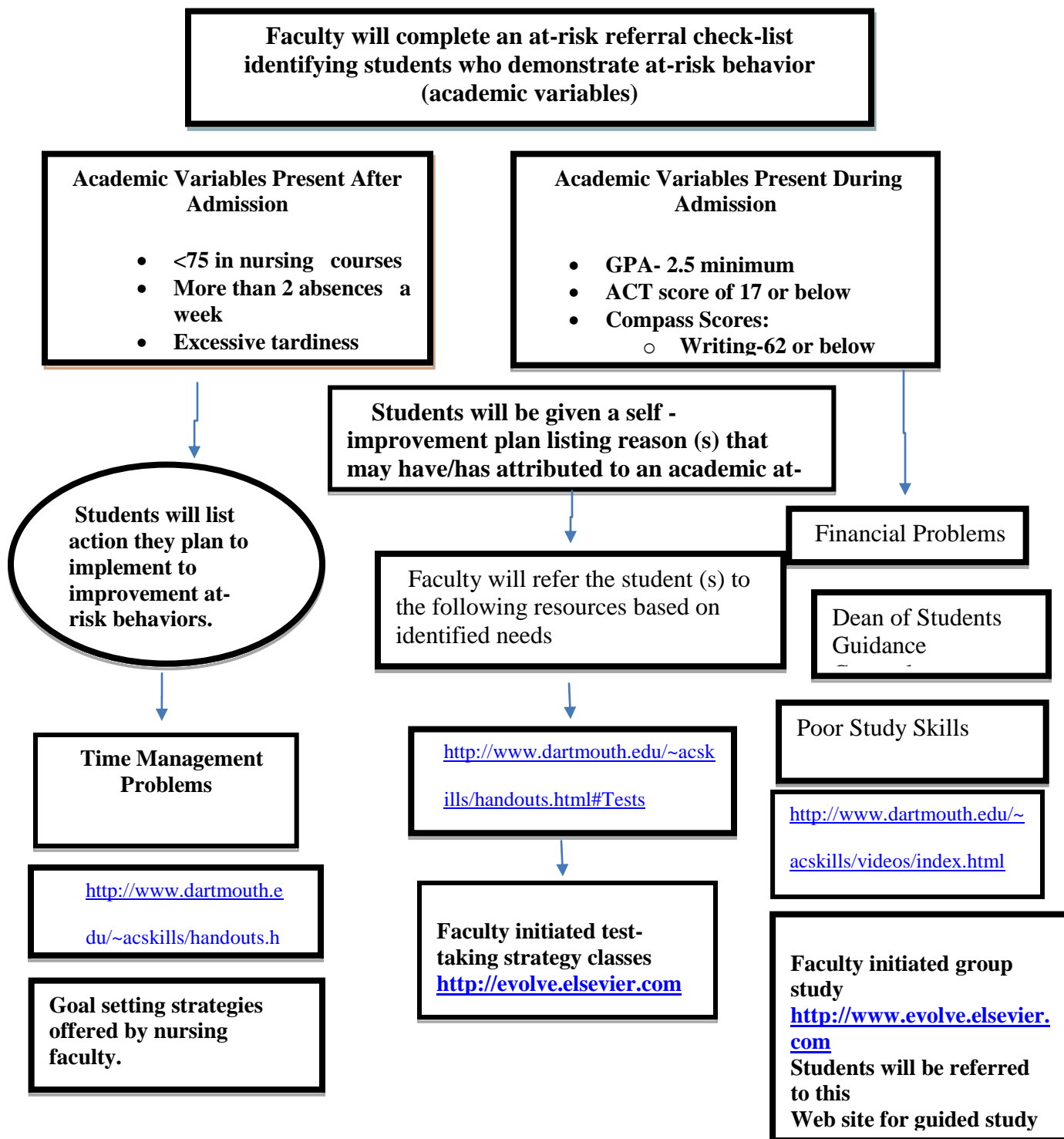
Logic Model

<b>Resources</b> In order to accomplish our set of activities	<b>Activities</b> In order to address our problem or asset we will accomplish the following activities:	<b>Output</b> We expect that once accomplished these activities will produce the following evidence of service delivery:	<b>Short-term &amp; Long term Outcomes</b> We expect that if accomplished these activities will lead to the following changes in 1-3 then 4-6 years:	<b>Impact</b> We expect that if accomplished these activities will lead to the following changes in 7-10 years:
Academic Support Team Time Nursing Faculty Financial Aid Advisor	Students will be identified as at-risk for academic failure academic variables are present during admission. An algorithm will be implemented with interventions for students who demonstrate at-risk behavior. Students will be given a self-improvement plan listing reason (s) that may have/has attributed to an academic at-risk status	Accurate and prompt identification of students who are at risk for academic failure. Success among nursing students: Increase retention rates and student academic success.	Educational providers will ensure that they are addressing student retention early to satisfy the demand for nurses. Understand support and explore the concept making sure the appropriate assistance is offered to students	Increase retention and student academic success



## Appendix D

### Early Alert Referral Algorithm



## *Appendix E*

### Consent Letter to Students

#### *Consent Letter To Be Given to the Participants*

My name is Roslana Gray. I am a student Doctor of Nursing Practice Candidate. My contact information is: 744 Pierce Street, Evergreen, AL, 251-227-0457. I am conducting a research study entitled "E-Alert" Early/Alert Detection Program for At-Risk Nursing Students (which seeks to detect, alert, refer and design a program for nursing students who are at-risk for academic failure).

I am asking you to participate in this study because I have a concern and desire to see nursing students succeed as well as accomplish their goals. Furthermore, there is a need for the program, due to global nursing shortage which is a result of student retention and attrition. Your participation is voluntary. Choosing not to participate will not affect your access to any goods or services. There are no direct benefits to participating in the study.

I will be conducting the study by asking looking at retention rates only. Participation in this study will take one semester. There are no costs to you for your participation.

I will not be collecting any data that can link you to the answers you provide. Your anonymity and the confidentiality of your responses will be protected as much as possible. If you are uncomfortable answering any question, you may choose to not answer that question or to stop your participation and have any notes, recordings, or hard copy answers destroyed. I will need a signed consent form for your participation in the study permitting me to collect the data you provide.

Should you have any questions or concerns about participation in this study, you may contact me using the information in the first paragraph. My faculty Advisor is Dr. Lora Claywell; email: lclaywel@regis.edu; phone: 636-285-0814. You may also contact the Chair of the Regis University Institutional Review Board for human subjects participation by telephone at 303-346-4206; by mail at Regis University, Office of Academic Grants, 447 Main, Mail Code H-4, 3333 Regis Blvd., Denver, CO, 80221; or by e-mail at irb@regis.edu with questions or concerns, or if you feel that participation in this study has resulted in some harm.

Sincerely

Roslana Gray, DNPc, RN

*Appendix F***Early-Alert Referral****Student Self-Improvement Plan****(For Student Use Only: Please return back to faculty)**

Student Name \_\_\_\_\_ Course \_\_\_\_\_ Date \_\_\_\_\_

Faculty \_\_\_\_\_ Semester \_\_\_\_\_

I \_\_\_\_\_ acknowledge that I am not maintaining a 75 or more in the following course \_\_\_\_\_ (list Course number or name)

I will list below reason (s) that may have caused an existing academically at-risk status:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

I \_\_\_\_\_ will list below actions, that I as a nursing student plan to implement in order to improve my average to 75 or above by the end of \_\_\_\_\_ semester.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_  
**Student's Signature/Date**

## Appendix G

## Early Alert Referral At-Risk Check List

Student Name \_\_\_\_\_ Course \_\_\_\_\_ Date \_\_\_\_\_  
 Instructor \_\_\_\_\_ Semester \_\_\_\_\_

### To Be Completed By Faculty

Please check the following academically at-risk variables present on admission into the practical nursing program: *(check only if these variables are present on admission into the practical nursing program)*.

1. \_\_\_\_\_ Grade Point Average Minimum 2.5 (this will be calculated according to the last 24 hours of college course work).
2. \_\_\_\_\_ ACT Score of 17 or below
3. \_\_\_\_\_ Compass Writing Score of 62 or below
4. \_\_\_\_\_ Compass Math score of 36 or below
5. \_\_\_\_\_ Compass Reading score of 76 or below

Please check the following at-risk behaviors demonstrated by the above named student: After admission in the nursing program

1. \_\_\_\_\_ Excessive tardiness (more than 2 a week)
2. \_\_\_\_\_ Excessive absences (2 a week)
3. \_\_\_\_\_ Academic course grade of < 75

Signature of Faculty \_\_\_\_\_ Date \_\_\_\_\_

*Appendix H***At-Risk Referral Form**

**Student Name** \_\_\_\_\_ **Date of Referral** \_\_\_\_\_  
**Semester** \_\_\_\_\_

**For Faculty Use Only:**

**Based on the above self –report of issues from student (s). The following resources will be provided: Please check the resource provided. This signifies that the below resources were provided to student:**

\_\_\_\_\_ Time Management  
 Problems: <http://www.dartmouth.edu/~acskills/handouts.html#Time>  
 \_\_\_\_\_ Poor Test Taking skills-  
<http://www.dartmouth.edu/~acskills/handouts.html#Time>  
 \_\_\_\_\_ Faculty initiated test-taking strategy classes: <http://evolve.elsevier.com>  
 \_\_\_\_\_ Financial Problems- Dean of Students & Guidance Counselor  
 \_\_\_\_\_ Poor Study Skills: <http://www.dartmouth.edu/~acskills/handouts.html#Time> <http://evolve.elsevier.com>  
 \_\_\_\_\_ Faculty initiated group study: Students will be referred to the following website for guided study sessions, academic enrichment workshops and smart study strategies:  
<http://www.evolve.elsevier.com>

\_\_\_\_\_ Referred to Health Careers Chairperson to review student evaluation forms

Faculty

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 Faculty Signature

*Appendix I*

CITI Certificates

## CITI Collaborative Institutional Training Initiative

### Human Research Curriculum Completion Report

**Printed on 11/25/2012**

**Learner:** Roslana Gray (username: RoslanaGray)

**Institution:** Regis University

**Contact** Evergreen, AL 36401 United States

**Information** Department: Nursing

Phone: 251-578-1338

Email: rgray@regis.edu

### Social Behavioral Research Investigators and Key Personnel:

**Stage 2. Refresher Course Passed on 11/23/12** (Ref # 9219597)

Required Modules	Date Complete d	
Biomedical 101 Refresher Course - Introduction	11/23/12	no quiz

SBR 101 REFRESHER MODULE 1 - History and Ethics	11/23/12	5/5 (100%)
SBR 101 REFRESHER MODULE 2 - Regulatory Overview	11/23/12	5/5 (100%)
SBR 101 REFRESHER MODULE 3 - Risk, Informed Consent, and Privacy and Confidentiality	11/23/12	5/5 (100%)
SBR 101 REFRESHER MODULE 4 - Vulnerable Subjects	11/23/12	4/4 (100%)
SBR 101 REFRESHER MODULE 5 - Education, International, and Internet Research	11/23/12	4/5 (80%)
How to Complete The CITI Refresher Course and Receive the Completion Report	11/23/12	no quiz
<p><b>For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.</b></p> <p>Paul Braunschweiger Ph.D.</p> <p>Professor, University of Miami</p> <p>Director Office of Research Education</p>		
CITI Course Coordinator		
<div>Return</div>		

## **CITI Collaborative Institutional Training Initiative (CITI)**

The RCR for Social & Behavioral Curriculum Completion Report

Printed on 11/25/2012

Learner: Roslana Gray (username: RoslanaGray)

Institution: Regis University

### Contact Information

Evergreen, AL 36401 United States Department: Nursing Phone: 251-578-1338 Email:  
rgray@regis.edu

The RCR for Social & Behavioral: This course is for investigators, staff and students with an interest or focus in Social and Behavioral research. This course contains text, embedded case studies AND quizzes. Stage 1. RCR Passed on 11/23/12 (Ref # 9219598)

### Required Modules

#### Date Completed

Introduction to the Responsible Conduct of Research

11/23/12

no quiz

Research Misconduct 2-1495



11/23/12

4/5 (80%)

Case Study - Truth or Consequences 2-1217

11/23/12

3/3 (100%)

Case Study - In the Field, No One Will Know 2-1218

11/23/12

3/3 (100%)

Case Study Plagiarism 2-1472

11/23/12

2/2 (100%)

Human Subjects 13566

11/23/12

4/5 (80%)

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiler Ph.D. Professor, University of Miami Director Office of Research  
Education CITI Course Coordinator

**CITI Collaborative Institutional Training Initiative (CITI)**

CITI Conflicts of Interest Curriculum Completion Report

Printed on 11/25/2012

Learner: Roslana Gray (username: RoslanaGray)

Institution: Regis University

Contact Information

Evergreen, AL 36401 United States Department: Nursing Phone: 251-578-1338 Email:  
rgray@regis.edu

Conflicts of Interest: Stage 1. Stage 1 Passed on 11/23/12 (Ref # 9219599)

Required Modules

Date Completed

CITI Conflict of Interest Course - Introduction

11/23/12

no quiz

Financial Conflicts of Interest: Overview, Investigator Responsibilities, and COI Rules

11/23/12

9/10 (90%)

Institutional Responsibilities as They Affect Investigators

11/23/12

5/5 (100%)

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D. Professor, University of Miami Director Office of Research

Education CITI Course Coordinator

*Appendix J*

## Regis IRB Approval Letter

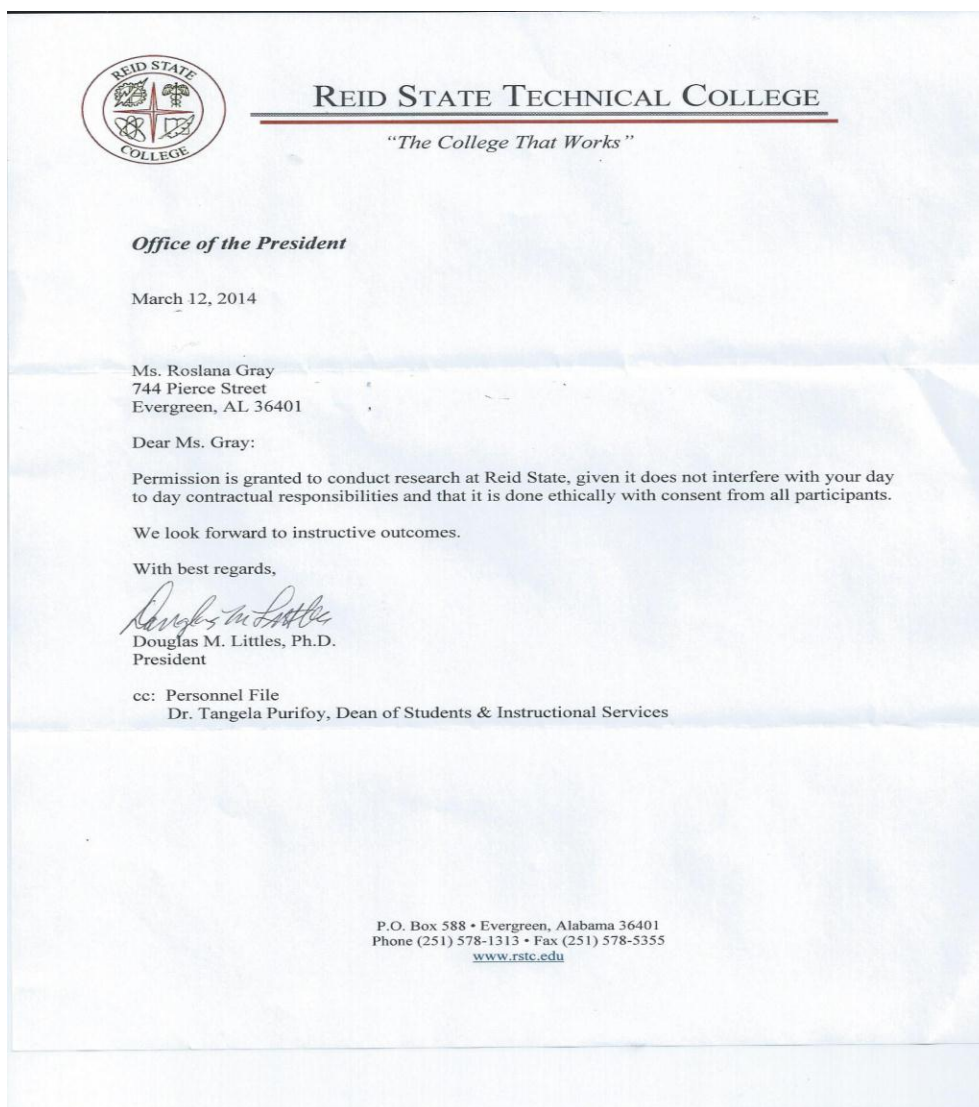
Dear Ms. Gray...

The Institutional Review Board has completed a thorough evaluation of your submitted proposal, *Early Alert Referral Program*. I am pleased to inform you that the proposal has been approved as an Exempt study per Category #1. You may begin study implementation and data collection upon receipt of this email. An official letter of approval for your study files will be forthcoming. We certainly wish you success with your investigation!

Patsy McGuire Cullen, PhD, PNP-BC  
Chair, Institutional Review Board  
[irb@regis.edu](mailto:irb@regis.edu)

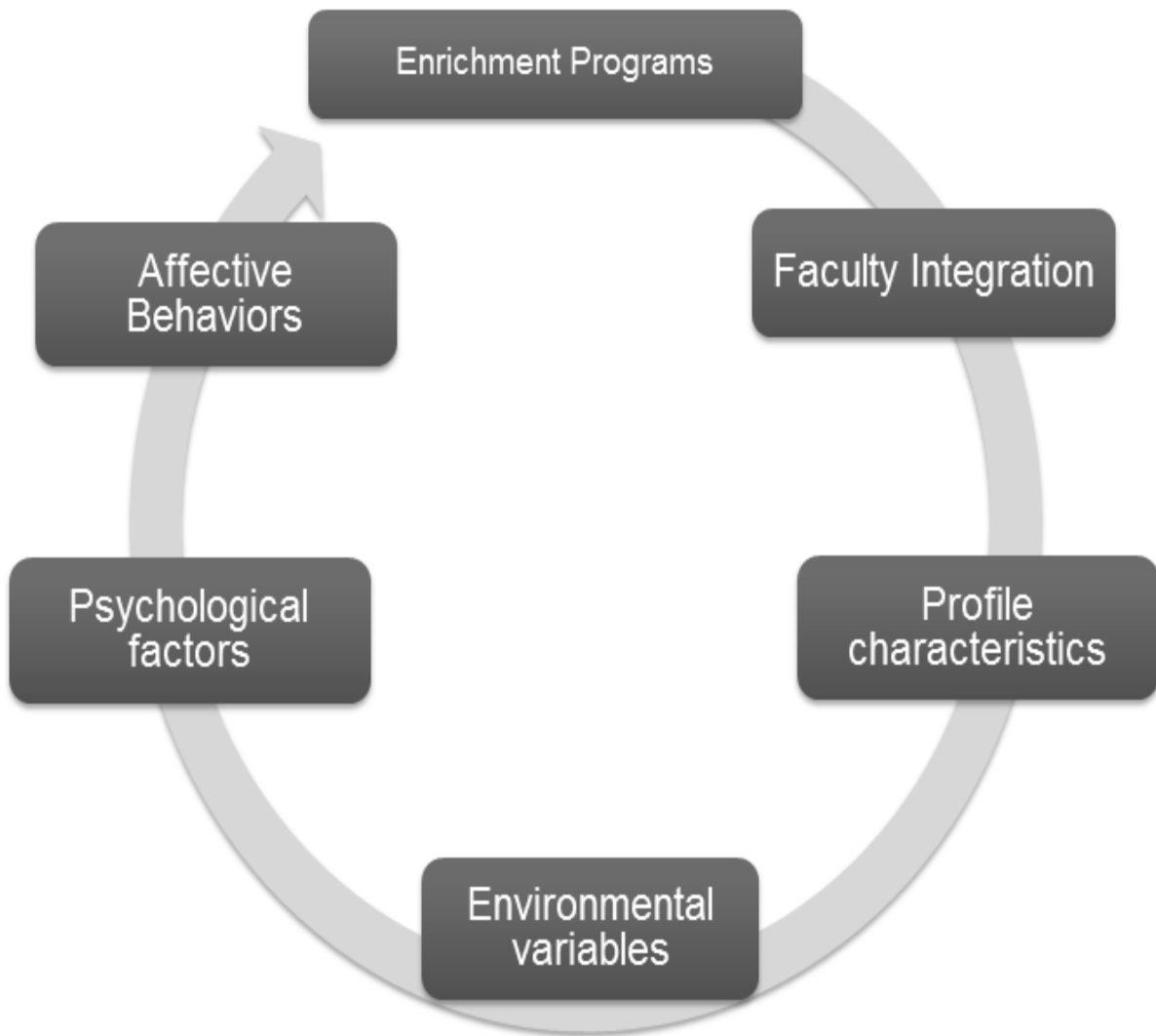
*Appendix K*

## IRB Approval Sponsoring Institution



*Appendix L*

## NURS Model



*Appendix M*

## Lewin's Change Theory

