

# Identifying Academic & Social Risk Factors of Baccalaureate Nursing Students Using the College Persistence Questionnaire

Kelly J. Betts Ed.D, RN, CNE University of Arkansas for Medical Sciences, College of Nursing 4301 W. Markham St. Little Rock, AR. 72205. United States, 501-526-6137 Kbetts2@uams.edu

Janet A. Shirley, MNSc, RN University of Arkansas for Medical Sciences, College of Nursing 4301 W. Markham St. Little Rock, AR. 72205. United States

Robert Kennedy, PhD University of Arkansas for Medical Sciences, Office of Educational Development 4301 W. Markham St. Little Rock, AR. 72205. United States

This study was funded by an intramural grant from the University of Arkansas for Medical Sciences Abstract

**Background:** Student success in a baccalaureate nursing program is of utmost importance at a southern College of Nursing (CON).CON faculty wanted to understand better what academic/ social risk factors attributed to attrition in the first year of the nursing program. The purpose of this study was to determine academic and social risk factors related to nursing student attrition using the College Persistence Questionnaire (CPQ). **Method:** This quantitative, descriptive study used the CPQ to evaluate 163 first year BSN students. **Results:** There were distinct, statistically significant differences ( $p \le 0.05$ ) between the At Risk (AR) and Non at Risk (NAR) groups on 16 questions of the CPQ that are considered to be a risk factor for students. **Conclusion:** The CPQ has been shown to be a reasonable tool to identify students at risk for attrition in the nursing program.

**Keywords:** Baccalaureate Nursing Students, Academic Risk, College Persistence Questionnaire (CPQ)

# 1. Background

Student success in a baccalaureate nursing program is of utmost importance at a Health Science Center in the southern U.S. Identifying students who are at academic and social risks are one major task of the ability to determine attrition, and if students will be successful on the NCLEX-RN exam after graduation. In 2010, the College of Nursing (CON) NCLEX-RN passage rate dropped to 74%. Over the next two years, the faculty fully integrated standardized testing from Assessment Technologies Institute (ATI) into the BSN curriculum, and hired a full-time academic coach. After these two programs were instituted, the NCLEX-RN passage rate increased from 74% to 88% in one year, and by year two, it increased to 90%. It is with this improvement that this research team gained a true interest in understanding the academic and social risk factors associated with attrition in the first year, and what factors may or may not contribute to NCLEX-RN success after graduation

The answer to this question and the search for the perfect remediation/coaching model is yet to be established in the literature, therefore leaving a gap in knowledge. The CON was interested in finding a tool that would help the academic coach identify specifically what academic and social risks factors attributed to a student's success or attrition in the BSN program. In reviewing the literature, the College Persistence Questionnaire (CPQ) had been used in liberal arts colleges as a screening tool to assess persistence and attrition in entry level students (first year students) (Davidson, Beck, & Grisaffe, 2015; Davidson, Beck, & Milligan, 2009). The CON decided to investigate the use of this tool to try and answer some of the academic questions related to academic and social risk in its own nursing student cohort.

## 1.1 Persistence and Attrition in Nursing Education

Measuring persistence and attrition in nursing programs has been an ongoing issue, as many students who enter nursing programs do not graduate, and those that do graduate, do not successfully pass the NCLEX-RN Licensure exam on the first attempt. Pre-admission screening can be helpful in identifying risk factors associated with academic risk, but many times it is not a fail-safe method for the prediction of persistence and retention in nursing education programs (Newton & Moore, 2009; Urwin, Stanley, Jones, Gallager, Wainwright, & Perkins, 2010; Jeffries, 2007; Horton, Polek, & Hardie, 2012). In nursing programs, calculation of attrition rates can be varied from each institution, however, attrition is typically defined as a loss of students during the program that results in a difference between the numbers of students who are admitted and begin the program and the number of students who complete the program.

Many nursing programs in the United States have attempted to identify pre-admission screening exams,



course standardized exams, and other variables that may predict nursing student success in nursing programs, but there still remains a gap in knowledge as what exactly are the predictors that include both academic and social attributes that truly identify success, and decrease attrition in nursing programs. A study by Horton, Polek, and Hardie, (2012) evaluated the relationship between enhanced remediation programs and NCLEX-RN Success. In doing so, they concluded that there were two predictors that improved a student's chance of being successful on the NCLEX-RN exam. They were student membership in an enhanced remediation group, and the student's first year medical surgical course scores. However, recommendations from the study challenged other nursing programs to mimic their study in order to determine overall generalizability to other nursing programs. McCarthy, Harris and Tracz, (2013) utilized the Assessment Technologies Institute (ATI) Test of Essential Academic Skills (TEAS V) and five ATI subject standardized exams to determine if these variables could predict NCLEX-RN pass rates. Results revealed a significant correlation among pre-nursing, ATI scores, and NCLEX-RN first time pass rates. Prediction of NCLEX-RN success rates using these standardized testing measures was supported with the strongest predictors being the ATI Medical Surgical standardized exam and the ATI Mental Health standardized exam.

## 1.2 Intensity of Nursing Programs

Historically and currently, the baccalaureate curriculum in nursing programs is very intense and the students are required to be in class and clinical 4-5 days per week sometimes up to 8-12 hours a day. The students may take as many as 15-18 hours per semester including both didactic and practicum hours. At the College of Nursing, students take 58 hours of pre-requisite courses prior to being accepted into the nursing program, which means that they come into the program as a junior level student and complete the remainder of their graduation hours of nursing in just four semesters. Students coming into the program have taken their pre-requisite general education courses from various types of universities and community colleges. Many students who enter the nursing programs are second degree students. Pre-admission Testing, interviewing, and admission GPA scores of 3.0 or higher are currently being used in many nursing programs to identify top candidates for their nursing programs. Due to the intense pace of nursing programs, student attrition can be impacted by factors not related to academics and these factors, if not identified early in the program, can have a negative impact of student success. Uyehara, Magnussen, Itano, and Zhang (2013) identified these factors as academic burn-out, maladaptive relationships with faculty, inability or difficulty being prepared for their clinical experiences, negative images in nursing, time pressures, conflicting demands, and discrepancy between student perceptions of nursing and the actual student experience.

## 1.3 Stress and Non-Academic Risk Factors

It has also been identified in the literature that there are many factors besides academic risk that may contribute to a student's attrition in the program such as financial constraints, medical or mental health issues, lack of family support, realization that nursing is really not the career choice for them, and social integration issues (Abele, Penprase & Ternes, 2013). It is these non-academic risk factors that we have identified as barriers to success in the nursing program that led us to the questions of whether or not the College Persistence Questionnaire (CPQ) would be a tool that would help us identify risk factors other than academic performance. Davidson, Beck, & Milligan (2009) developed the College Persistence Questionnaire that was designed to allow faculty and administrators to identify students who were at risk of dropping out of college, ascertain why the student drops out and identify persistence variables of undergraduate students. Davison, Beck & Milligan (2009) utilized data from four colleges and a review of student retention in the literature to develop their questionnaire item pool. The data from these universities and the literature concluded that academic performance, institutional and degree commitments, academic and social integration, satisfaction regarding support services, finances, and social support and psychological adjustment were key categories that would be used to develop the questionnaire. The CPQ does not contain academic performance measures, as institutions generally contain and monitor these indices in their student databases.

# 2. Research Design

This quantitative, descriptive pretest/posttest study used the College Persistence Questionnaire (CPQ) (Davidson, Beck, and Milligan, 2009) to help identify factors that influence academic and social risk for students in the College of Nursing baccalaureate program. The students received pre and post questionnaires during their first year of the BSN program. The questionnaire data provided information that can be used to compare the students who were identified by the academic coach and the program administrator to be *At Risk* (AR) versus *Non at Risk* (NAR). For this paper, the results of the data from the pre-test questionnaire will be discussed. The subjects comprised a census sample from the two junior class cohorts from the 2013 and 2014 entering class.



## 2.1 Purpose

The purpose of this pilot study was to determine academic and social risk factors related to nursing student attrition using the CPQ. The study was driven by the following research question: "What are the characteristics of an at-risk student in the BSN program based on CPQ scores?" It was important to ask specifically about the BSN program because although there are certainly shared components and comparable students in many programs, each one still has unique features which need to be addressed.

#### 2.2 Sample

There were a total of 163 students who took the CPQ (Pre-test). The CPQ was administered in a large computer lab in the College of Nursing. This included students both on the main campus and the satellite campus. Meeting in the lab allowed participating students to complete the instrument on-site where the return rate was expected to be much higher than if a link were provided for an off-site response where distractions could lessen the likelihood of responding.

## 2.3 Variables

A number of variables were determined from the literature and experience to be likely candidates to investigate as academic and social risk factors possibly influencing nursing student attrition. The CPQ score served as the dependent variable for the inferential component of the study. Academic risk factors explore the connection between perceptual viewpoints and educational attainment and persistence. Academic risk factors included learning disabilities, poor study habits, test anxiety, English as second language (ESL), low critical thinking skills, and low competency with computer skills needed to complete assignments and testing. Social support variables link students' interpersonal network and their decision to pursue a college degree. Social risk factors include: having to work full time while in school, financial status, single parenting, and marital problems, commuting to school, and social isolation during the program, age, sex and race.

#### 2.4 Instrument

The College Persistence Questionnaire (CPQ) has been used throughout the United States and also in many foreign countries. It was developed from the retention literature, producing 53 items that were factor analyzed for construct validity, yielding six reliable factors: Institutional Commitment, Degree Commitment, Academic Integration, Social Integration, Support Services Satisfaction, and Academic Conscientiousness (Davidson, Beck, & Milligan 2009). A total of 2022 undergraduates from four bachelor's and master's degree-granting institutions, comprising primarily young, Caucasian, females were the participants; a group that is similar to the makeup of the College of Nursing. A second study examined the predictive validity of the factors and determined that three factors were statistically significant predictors of persistence to the second year, after controlling for high school class rank and standardized test scores: Institutional Commitment, Academic Integration, and Academic Conscientiousness. A total of 283 first-semester freshman participated in this follow-up study, with 259 having complete data for analysis, of which two were eliminated due to their having answered all questions with the same response. The logistic regression model was reasonably effective, correctly classifying 66% of the students as persisters or non-persisters, using a 0.43 cutoff reduced from the default 0.50 to effect a more desirable balance between false positives (Type I errors) and false negatives (Type II errors), particularly given the fairly unequal numbers of persisters and non-persisters (Davidson, Beck, & Milligan 2009).

Internal consistency as measured by Cronbach's alpha, ranged from 0.63 (Academic Conscientiousness) to 0.82 (Social Integration). The other two stronger predictors had alphas of 0.78 (Institutional Commitment) and 0.81 (Academic Integration). Alpha levels of 0.80 are generally acceptable, and all of these but Academic Conscientiousness were within range of 0.80. Academic Conscientiousness (0.63) is somewhat lower, but still within a reasonable range. In the second study, both predictive validity and incremental predictive validity were addressed. To assess incremental predictive validity, both high school rank and SAT scores or ACT equivalents were entered as a block into the logistic regression model. With this information alone, correct classifications were 59%. By adding the six CPQ factors, the correct classifications rose to 68% (Davidson, Beck, & Milligan 2009).

# 3. Research Procedure

The University Investigational Review Board (IRB) determined that this study would not involve human subjects as defined in 45 CFR 46.102, and therefore it did not fall under the jurisdiction of the IRB approval process. Within the first two months of the students entering the BSN program, the CPQ was administered as a pre-test. The students also took the questionnaire as a post-test at the end of their first year in the BSN program. The CPQ is not part of the usual testing that the students receive once admitted into the program. The students did not receive any new interventions related to the results of the questionnaire during the study. Once the students took routine standardized tests and the pre-test CPQ, students received only remediation interventions



related to the results of the Critical Thinking Exam and the Self-Assessment Inventory and the TEAS V Exam. The students receiving remediation were the students who were identified as having academic risk related to their scores from the standardized tests or students who felt that they needed additional remediation during the first year, as indicated by self-referral or by faculty referral. The academic coach met with each student individually to go over the results of their tests and help them identify interventions that would meet their individual needs. Students also received routine remediation related to poor exam grades. These students were referred to the academic coach by themselves or their faculty member. All students who scored less than 75% on any exam were referred to the academic coach for remediation, which consisted of individual or study group interventions. Any student in the BSN program who felt a need to meet with the academic coach to get assistance could make an appointment.

## 3.1 Data Collection/Analysis

Each student who participated in the study was required to take the CPQ via internet website provided by the owners of the CPQ (Davidson & Beck, 2009). Each student questionnaire for pre and post data was kept in a [secure] database that is part of the CPQ website. The students were required to take the questionnaires as a group in the College of Nursing computer labs at outlined times during their first year of the BSN program. Once the students completed the questionnaire, the owners of the questionnaire provided the investigators of the study all of the de-identified questionnaire data to be analyzed by our statistician. Dr. William Davidson agreed to be available to assist our statistician with any data analysis and the tools recommended for analysis, free of charge. Each CPQ exam was purchased by the UAMS CON. The academic variables included learning disabilities, poor study habits, test anxiety, English as second language (ESL), low critical thinking skills, and low competency with computer skills needed to complete assignments and testing. The social variables included age, race, sex, having to work full time while in school, financial status, single parenting, marital problems, commuting to school, and social isolation during the program. For the continuous variables, means and standard deviations were calculated. For the discrete variables, frequencies and percentages were determined.

#### 3.2 Outcomes

Student retention was measured by data obtained from the CPQ and the associated demographic risk factors; as well as and the need for individual remediation that took place with students who were at risk for academic and social issues. The assessments of the academic coach and a faculty member who also had extensive experience working directly with the students, provided an indication of the students' likelihood of being at-risk of non-persistence. The CPQ and the demographics were compared descriptively to determine if there were actual substantive differences in these two groups. Extant differences would support that the coach's and the faculty member's experientially-informed evaluations were a suitable way to distinguish those students who were at risk from those who were not.

## 4. Results

The research question which needed to be answered was, "What are the characteristics of at-risk students in the BSN program?" A total of 163 students from the two entering class cohorts completed the CPQ (Pre-Test). Of the 163, 132 (80.9 %) were female and 31 (19.0 %) were male. Race/ethnicity was indicated as Asian (3, 1.8 %), black (20, 12.3%), Hispanic (5, 3.1%), white (130, 79.8%), and other (5, 3.1%). For the CPQ factor areas, the possible ranges were -2.00 to +2.00. For the BSN program, all of the areas had students who scored as high as 2.00, the maximum positive score. However, the smallest negative scores varied: Academic Integration means had a low of -0.90 with a median between 1.40 and 1.50. The Financial Strain means had a low of the minimum of -2.00 with a median of about -0.25. Social Integration means had a low of -1.33 with a median between 0.83 and 1.00. The other area means had lows and medians as indicated here: Degree Commitment, 0.40, median between 1.80 and 2.00 Collegiate Stress, -1.86, median between -0.17 and -0.14; Academic Advising -0.75, median between 1.25 and 1.50; Scholastic Conscientiousness, 0.00, median between 1.33 and 1.50; Institutional Commitment, -0.50, median of about 1.80; Academic Motivation, -1.00, median between 0.63 and 0.75; Academic Efficiency, -1.40, median between 0.80 and 1.00.

Differences in at-risk and non-at-risk demographics and student CPQ individual question scores were defined to be substantive if the Chi Square results were significant at the 0.05 level. Other descriptive variables were ethnicity (at-risk: African American, 35%, white, 60%; non-at-risk: African American, 4.9 %, white, 86.2%), and sex (at-risk: female, 70% and male, 30%; non-at risk: female, 84.6% and male, 15.4%). A summary of the demographic data and amount of time (hours) spent with the academic coach are listed in Table 2. There were several CPQ questions in which there were also large differences with at least one level of the responses, for the at-risk and non-at-risk groups. The rating scale for each question was in the range of -2.0 to 2.0. In Table 3, each CPQ question is represented, along with the chi square, p-value, and the results in percentage of each question based on the responses of the *At Risk* group and the *Non at Risk* group.



## 5. Discussion

Using the CPQ as a screening tool for the identification of students at academic and social risk is a new concept in nursing programs. This tool has been used successfully in liberal arts colleges as a screening tool for new students in their first semester to try and determine persistence and attrition rates. The substantive differences identified along with the demographic variables, as well as the CPQ questions demonstrate that using the academic coach and the faculty member is a viable approach to distinguishing *At Risk* (AR) and *Non at Risk* (NAR) students. By giving the CPQ at the beginning of the nursing students first semester, academic coaches can take the results and start working with *At Risk* students early in the program using interventions that will enhance the students' ability to be successful throughout the program. Demographically, the student population in the study was very similar to the demographics of the student population in both the junior and senior class.

Of the 163 students in the study, there were 70% female in the AR group and 84.6% females in the NAR group. Males represented 30% in the AR group and 15.4% of the NAR group. The students in the study were also racial and ethnically diverse. Eighty-seven percent of students in the study were in the first semester of the nursing program, with only 12.9% of students who had failed a course the previous year and had returned to repeat the semester in which the CPQ was administered. Students in the AR group had more visits with the academic coach collectively than those in the NAR group, with 20% of them having at least 5 visits with the academic coach during the program opposed to only 0.8% of NAR students. During the first and subsequent semesters, students are required to meet with the academic coach if they fail a course exam. They are also required to remediate in each course if they fail to meet the passing benchmark score on their course standardized exam. Remediation occurs over the Christmas Holiday and summer months between the junior and senior year. However, it is also fair to say that students who not at risk do request to meet with the academic coach throughout the year to ask questions or receive assistance, as evidenced by 87% having one visit, and 10.6% having at least two visits. The CQ results have been categorized into 5 groups for discussion: 1) Academic tasks/workload; 2) Support Systems; 3) Academic/Social integration; 4) Stressors; and 5) Employment outlook

## 5.1 Academic Tasks/Workload

Students who were asked about their enthusiasm for doing academic tasks. Although both groups of students were generally enthusiastic, more of the AR students were somewhat unenthusiastic, which may lead to incompletion of assignments, lack of studying, and poor performance on exams. Students in the AR group also had higher feelings of being overwhelmed with the academic workload (92.5% versus 87.1% respectively, p=0.04). Students in the program are required to attend class and perform practicum hours 4-5 days per week and carry approximately 15-18 hours per semester. When asked about proof reading writing assignments before submitting, students in the AR group spent more time than those in the NAR group (92.5% versus 79.3%, p=0.00). As a result of spending more time proof reading, students have less time to focus on other assignments and tasks that may or may not be of more importance to the success of their class.

Students were also asked about the clarity of their instructors and the syllabi in detailing what needs to be accomplished in order to be successful in courses. More students in the AR group felt that the faculty/syllabi were unclear or somewhat unclear compared to the NAR student (15.0% versus 8.9%, p=0.01). There was also a 10% neutral response for students in the AR group compared to a 4.1% neutral response in the NAR group. At this point in the study, it is difficulty to draw conclusions or make assumptions as to why the AR students were more negative, but one suggestion might be that these students have a harder time trying to gather, sort, and apply the information in the syllabus, or they may not feel comfortable asking the faculty for clarification. Students in the AR group also had more difficulty working on projects that require more than a few months to complete and encountered times in which they wondered if they could complete the assignment. Many students in this category of risk have difficulty with organizing tasks into sizable bites or may become distracted with other assignments and not be realistic regarding the timeframe required to complete the assignment. This may lead to frustration and worry that they can't complete the task along with other assignments and academic workload that they already have in other courses.

## 5.2 Support Systems

Students in the AR group tended to be more worried about whether or not the faculty were concerned about their intellectual growth (7.5% versus 1.6%, p=0.00). The AR group also had neutral responses of 10% versus 5.7%. However, the majority of students in both groups were not concerned. In regards to family support of the pursuit of a college degree, all students felt supported, however, the NAR group did have 1.6% of students who did not feel supported by their family. The AR group also had 10% of students who selected neutral support. Family support can be a relative term and some students, especially those who are first generation college students may not have the family support expected due to parental knowledge and acceptance of a college education (McFadden, 2015). Single parents may also have difficulty with family support, as they are the primary caregiver



and can't share the responsibilities with a spouse or significant other. Some students move away from their families to attend the nursing program and may not have the support systems locally to provide encouragement and support that they have been accustomed to.

## 5.3 Academic Social Integration

Academic and social integration is important to student success, as it provides students with a way to socially support each other with collaboration and teamwork. This is important for the culture of nursing. When asked questions regarding College Life and if the positives outweighed the negative, more students in the AR group had more negative scores, however, more students in the NAR group felt that the positives were equal to the negatives. Students in the AR group also had more negative scores of their overall impression with others students in the nursing program. Overall stress of the institution scores indicated that the AR students felt that there was much more stress that was experienced at the institution than NAR students. The negativity from AR students could be an implication that they are not adequately socially integrated, so therefore, their stress levels are higher. Lastly, the students in the NAR group had a higher sense of loyalty for the college compared to the AR group.

## 5.4 Academic Stressors

The types of stress that can occur each day for students is variable. When asked on a typical day, how preoccupied students were with personal trouble, students in the AR group overall were more preoccupied than students in the NAR group. They also worried more about getting the work done on time. Anecdotal feedback from faculty and the academic coach has revealed that many students endure personal conflicts and crisis that have a direct impact on their performance both academically and socially while in the nursing program. Many students have to work to support their families while going to a full-time program and this may be a significant contributor to many of the personal worries that students face.

## 5.5 Employment Outlook after Graduation

Lastly, students were asked to rate question pertaining to the importance of the training received and how it relates to helping them find a job. The students in the AR risk group had lower positive scores indicative that they did not feel that it was as important as the students in the NAR group. The students in the AR group had 7.5% that selected a neutral response versus no neutral responses for the NAR group. In response to the question of how certain they are that the training received will lead them to an enjoyable job, students in the AR group had lower positive scores of certainty versus the students in the NAR group.

## 6. Conclusions

The CPQ has been shown to be a reasonable tool to help identify students at risk for attrition in the nursing program if used upon admission to the program as a screening tool. It is worth noting that adding this tool to other academic admission testing could provide an deeper understanding of social risk factors related to attrition that are not identified using just academic admission testing alone. More research is needed using various types of nursing programs and increased numbers of students. Future research comparing the results of the CPQ to outcomes such as standardized testing scores, Pre-Admission Testing, and comprehensive predictor exams. It would also be of interest for academic coaches and administration to identify what the definition of *At Risk* looks like in their student population and identify students who fit this definition. Last, evaluation of the At Risk (AR) versus the Non at Risk (NAR) group and compare the results of the CPQ to the program outcomes to see if there is statistically significant differences between groups.

## References

- Abele, C., Penprase, B., & Ternes, R. (2013). A closer look at academic probation & attrition: What courses are predictive of nursing student success? *Nurse Education Today*, 33, 258-267.
- Davidson, W.B, Beck, H.P., & Grisaffe, D.B. (2015). Increasing the institutional commitment of college students: Enhanced measurement and test of a nomological model. *Journal of College Student Retention: Research*, 17(2), 162-185. doi: 10.1177/1521025115578230
- Davidson, W.B., Beck, H.P., & Milligan, M. (2009). The College Persistence Questionnaire: Development and validation of an instrument that predicts student attrition. *Journal of College Student Development*, 50 (4), 1-18.
- Horton, C., Polek C., & Hardie, T.L. (2012). The relationship between enhanced remediation and NCLEX success. *Teaching & Learning in Nursing*, 7, 146-151. doi: 10.1016/j.teln.2012.06.002
- Jeffries, M.R. (2007). Tracking student success through program entry, progression, graduation, and licensure: Assessing undergraduate nursing student retention and success. *Nurse Education Today*, 27, 406-419. doi: 10.1016/j.nedt.2006.07.003



- Newton, S.E., & Moore, G. (2009). Use of aptitude to understand Bachelor of Science in Nursing student attrition and readiness for the National Council Licensure Examination-Registered Nursing. *Journal of Professional Nursing*, 25(5), 273-278. doi: 10.1016/jprofnurs.2009.01.016
- McCarthy, M.A., Harris, D., & Tracz, S.M. (2014). Academic and nursing aptitude and the NCLEX-RN in baccalaureate programs. *Journal of Nursing Education*, 53(3) 161-170. doi: 10.3928/01484834-20140220-01
- McFadden, D. (2016). Health and academic success: A look at the challenges of 1<sup>st</sup>-generation community college students. *Journal of the American Association of Nurse Practitioners*, 28(4), 227-232. doi: 10.1002/2327-6924.12345
- Uyehara, J., Magnussen, L., Itano, J., & Zhang, S. (2007) Facilitating program and NCLEX success in a generic BSN program. *Nursing Forum*, 42(1), 31-38. Urwin, S., Stanley, R., Jones, M., Gallagher, A., Wainwright, P., & Perkins, A. (2010).
- Understanding student nurse attrition: Learning from the literature. *Nurse Education Today, 30,* 202-207. doi: 10.1016/j.nedt.2009.07.014
- Williams, M.G. (2010). Attrition and retention in the nursing major: Understanding persistence in beginning nursing students. *Nursing Education Research*, 31(6), 362-367

Table 1. Characteristics of Students who completed the CPQ (N-163)

Characteristic	Result
SEX	
Female	132 (80.9%)
Male	31 (19.0%)
ETHNICITY	
Asian	3 (1.8%)
African American	20 (12.3%)
Hispanic	5 (3.1%)
Caucasian	130 (79.8%)
Other	5 (3.1%)
First Semester in the	Yes = 142 (87.1%)
program	No = 21 (12.9%) (These students previously failed a semester, returned at a later
	date and took the CPQ)

Table 2. Demographics of the "At Risk" versus "Non-at Risk" Group

DEMOGRAPHIC FACTOR	AT RISK GROUP	NON AT RISK	p value
		GROUP	
SEX			
Female	70%	84.6%	0.04
Male	30%	15.4%	
ETHNICITY			
White	60%	86.2%	0.00
African American	35%	4.9%	
Hispanic	0.0%	4.1%	
Asian	2.5%	1.6%	
NUMBER OF HOURS SPENT WITH			
THE ACADEMIC COACH			
At least one	32.5%	87%	0.00
Two	25.0%	10.6%	
Three	15.0%	1.6%	
Four	7.5%	0.0%	
Five	20.0%	0.8%	



Table 3. Questions from the CPQ that were statistically significant (P value  $\leq$  0.05)

Questions from CPQ	P Value
How supportive of your family of your pursuit of a college degree, in terms of their	0.02
encouragement and expectations?	
Very Supportive	
Somewhat Supportive	
Neutral	
Somewhat Unsupportive	
Very Unsupportive	
Not Applicable	
Students differ quite a lot in how distressed they get over various aspects of college life.	0.037
Overall, how much stress would you say that you experience while attending this institution?	
Very Much Stress	
Much Stress	
Some Stress	
A little Stress	
Very Little Stress	
Not Applicable	
In general, how enthused are you about doing academic tasks?	0.034
Very Enthusiastic	
Somewhat Enthusiastic	
Neutral	
Somewhat Unenthusiastic	
Very Unenthusiastic	
Not Applicable	
How often do you feel overwhelmed by the academic workload here?	0.04
Very Often	
Somewhat Often	
Sometimes	
Rarely	
Very Rarely	
Not Applicable	
How concerned about your intellectual growth are the faculty here?	0.005
Very Concerned	
Somewhat Concerned	
Neutral	
Somewhat Unconcerned	
Very Unconcerned	
Not Applicable	
How much time do you spend proofreading writing assignments before submitting them?	0.008
A lot	
Some	
Little	
Very Little	
None	
Not Applicable	
The life of a college student typically has both positive and negative aspects. At this time,	0.03
would you say that the positives outweigh the negatives, or vice versa?	
Positives far outweigh the negatives	
Positives somewhat outweigh the negatives	
Positives and negatives are equal	
Negatives somewhat outweigh the positives	
Negatives far outweigh the positives	
How clear have the instructors and syllabi usually been in detailing what you need to do in	0.01
order to be successful in courses?	
Very Unclear	



Somewhat Unclear	
Neutral	
Somewhat Clear	
Very Clear	
Not Applicable	0.02
On a typical day, how much do you worry about getting your work done on time?	0.03
Very Much	
Much Some	
A little	
Very Little	
Not Applicable	0.00
How often do you encounter course work that makes you wonder whether you can do it	0.02
successfully?	
Very Often	
Somewhat Often	
Sometimes	
Rarely	
Very Rarely	0.002
On a typical day, how preoccupied are you with personal troubles?	0.003
Very Preoccupied	
Somewhat Preoccupied	
A little Preoccupied	
Not Very preoccupied	
Not at all Preoccupied	
Not Applicable	0.02
How much loyalty do you feel to this college, based on your experiences here?	0.03
Very Much Loyalty	
Much Loyalty	
Some Loyalty	
Little Loyalty	
Very Little Loyalty	
Not Applicable	0.01
How important is it that the training here will get you a good job?	0.01
Very Important	
Somewhat Important	
Neutral	
Somewhat Unimportant	
Very Unimportant	
Not Applicable	
How certain are you that the training you are receiving here will lead to an enjoyable job?	0.02
Very Certain	
Somewhat Certain	
Neutral	
Somewhat Uncertain	
Very Uncertain	
Not Applicable	0.04
How difficult is it for you to keep working on projects that require more than a few months to	0.04
complete?	
Extremely Difficult	
Very Difficult	
Somewhat Difficult	
Slightly Difficult	
Not at all Difficult	
Not Applicable	