

Author: Blaney, Erin P

Title: *Impact of Academic Advising on Retention within the Dental Hygiene Program at Northeast Wisconsin Technical College*

The accompanying research report is submitted to the **University of Wisconsin-Stout, Graduate School** in partial completion of the requirements for the

Graduate Degree/ Major: MS Careers in Technical Education with an Emphasis in Administration.

Research Adviser: Carol Mooney, Ph.D.

Submission Term/Year: Fall, 2011

Number of Pages: 51

Style Manual Used: American Psychological Association, 6th edition

I understand that this research report must be officially approved by the Graduate School and that an electronic copy of the approved version will be made available through the University Library website

I attest that the research report is my original work (that any copyrightable materials have been used with the permission of the original authors), and as such, it is automatically protected by the laws, rules, and regulations of the U.S. Copyright Office.

STUDENT'S NAME: Erin Patricia Blaney

STUDENT'S SIGNATURE: [Redacted]

DATE: 12/22/2011

ADVISER'S NAME (Committee Chair if MS Plan A or EdS Thesis or Field Project/Problem):

ADVISER'S SIGNATURE: [Redacted]

DATE:

Digitally signed by Carol Mooney
DN: cn=Carol Mooney, o=UW-Stout,
ou=School of Education,
email=mooneyc@uwstout.edu, c=US
Date: 2011.12.22 17:53:43 -06'00'

This section for MS Plan A Thesis or EdS Committee members (other than your advisor)

1. CMTE MEMBER'S NAME:

SIGNATURE: _____

DATE:

2. CMTE MEMBER'S NAME:

SIGNATURE: _____

DATE:

3. CMTE MEMBER'S NAME:

SIGNATURE: _____

DATE:

This section to be completed by the Graduate School

This final research report has been approved by the Graduate School.

(Director, Office of Graduate Studies)

(Date)

Blaney, Erin P. *Impact of Academic Advising on Retention within the Dental Hygiene Program at Northeast Wisconsin Technical College*

Abstract

Academic advising has come a long way since its start in higher education. The academic advising profession today does more than help students create a class schedule. Advisors are expected to assist students in achieving their academic goals. This assistance has become a valuable safety net for students. As students are stretched thinner with work, school and family commitments, retention rates in post-secondary education are decreasing. Academic advising has long been viewed as a valuable branch in student support; but now administrators would like to measure how effective advising is in regard to program retention.

The purpose of this study was to identify whether academic advising has had an impact on student success and retention in the dental hygienist program at NWTC. The researcher conducted ex post facto research aimed at answering three main research objectives. Data was examined in the dental hygiene program before and after the addition of an academic advisor. Retention and program completion rates were compared and contrasted.

The results show that yes, so far academic advising has had a positive impact on student success in the dental hygienist program at NWTC. However, the academic advising model is new at NWTC, and should probably be researched and observed further before implementing mandatory advising for other NWTC programs.

Table of Contents

	Page
.....	Page
Abstract.....	2
List of Tables	5
Chapter I: Introduction.....	6
Statement of the Problem.....	7
Purpose of the Study	8
Relationship of Background and Problem	9
Research Questions.....	9
Importance of Topic.....	10
Assumptions and Limitations	10
Definition of Terms.....	11
Chapter II: Literature Review	13
History of Academic Advising	13
The Evolution of Dental Hygiene.....	16
Summary.....	20
Chapter III: Methodology	21
Design	21
Selection of Sample	22
Description of Sample.....	23
Instrumentation	23
Data Collection Procedures.....	24
Data Analysis	25

Limitations	25
Chapter IV: Results.....	27
Results.....	28
Research Objective #1	28
Figure #1 – Trends in Demographics.....	29
Figure #2 –Student Population Demographics	31
Figure #3 –Trends in Courses	33
Research Objective #2	33
Research Objective #3	37
Summary.....	39
Chapter V: Discussion	41
Limitations	42
Summary.....	44
Conclusions.....	46
Recommendations.....	48
References.....	49

List of Tables

Table 1: Faculty Data.....	31
Table 2: Summer Term.....	33
Table 3: Fall Term.....	34
Table 4: Spring Term.....	35
Table 5: Program Completion.....	36

Chapter I: Introduction

Academic Advising has been around, in one form or another, since the inception of higher educational systems in this country. Advising was defined as “the complicated process of guiding students through an academic career” (Champlin-Scarff, 2010). Academic planning has been a huge part of the advising profession, but it has grown into so much more. Studies have shown that students need “guidance in personal, moral, and intellectual matters beyond the scope of their classroom studies” (Shaffer, Zalewski, & Leveille, 2010; Cook 2009). Growth and development of academic advising has mirrored that of higher education in the United States (Cook, 2009). As education has grown and diversified, so have the roles and responsibilities of academic advising on campus. Advising has built a reputation for itself throughout the years as an area in the college with true student knowledge (Aiken-Wisniewski, Smith & Troxel, 2010). High volumes of consistent student interaction have allowed advisors to “recognize emerging trends in skills, behaviors and dispositions” (Aiken-Wisniewski, Smith & Troxel, 2010). Advisors have this inner knowledge of student needs that makes their role an essential component in student retention.

Research has shown that advice and guidance from an academic advisor has a direct impact on student success and retention. In addition to other things, advisors helped students determine when to take classes to successfully meet the prerequisite and corequisite requirements for their program and stay on track for graduation (Santoso, 2010; Harrison, 2009). Studies have also shown that academic advising can have a direct effect on the success and retention of minority students at predominately White institutions (Museus & Ravello, 2010). Not all research has been as positive on the effected of advising in relation to student success. In a 2008 article, Bahr noted that research has shown advising can negatively affect a student regarding their personal ambition (706). The article also described how advisors can talk

students out of one program, and into another based on either their placement testing or the advisors perception of the students' academic ability (Bahr, 2008).

Despite the perceived positive benefit academic advising may have on retention, the challenge for administration has been getting students to attend regular advising appointments. Typically, forced or mandated advising has been reserved only for "at-risk" learners (Schwebel, Walburn, Jacobsen, Jerrolds, & Klyce, 2008). However, research has shown that students benefit from, and appreciate, mandated advising sessions (Schwebel, Walburn, Jacobsen, Jerrolds, & Klyce, 2008). There is another school of thought that encourages advisors to apply project management concepts to their scheduling. If academic advisors taught students how to plan their own programs, it is thought that advisors could teach students project planning skills that can be utilized after college and throughout a lifetime (Anantatmula, 2010). While the latter method may have increased student skills, there has not been significant research available to demonstrate its effects on retention.

Statement of Problem

Retention problems in higher education have negatively affected the student and the institution. Students who did not persist in their program incurred tuition, fees and debt. They left the college with student loan debt and no credential to aid in securing a job. The institution lost a fulltime equivalent (FTE). Colleges and universities would not have to recruit as many new students each year if they were more successful at retaining those students who are pursuing credentials. Post-secondary educators needed to discover ways to increase retention in programs across campuses. At Northeast Wisconsin Technical College (NWTC), retention in the dental hygienist program continued to be a problem. Dental hygiene is a highly competitive health science program and often students were underprepared for the rigor of their courses. Faculty

and staff have tried to counteract this lack of preparedness by requiring intense prerequisite coursework prior to application, high program benchmarks for assessment testing and informative orientation sessions, as evidenced by program retention data, but students did not take advantage of the extra help.

Faculty and administration of the hygienist program at NWTC, along with staff from student services, decided these dental students needed stronger interventions to increase retention. An academic advisor was assigned to work with students. It was hoped that by adding an academic advisor as a resource, student success would increase, therefore retention rates would be increased. Four years later, NWTC wanted to see if those hypotheses were validated: did academic advising increase retention rates in the dental hygienist program? As retention rates continued to decrease and funding became limited, NWTC had to evaluate all strategies dedicated to increasing student retention. Had academic advising increased student retention and program completion in the dental hygienist program? Through investigation of data and program demographics, NWTC hoped to learn if academic advising has had a positive impact on retention rates in dental hygiene.

Purpose of the Study

The purpose of this study was to evaluate the effectiveness of academic advising as it relates to retention in the dental hygienist program at NWTC. More specifically, this study examined the dental hygienist program at Northeast Wisconsin Technical College (NWTC) in order to determine if academic advising had any influence on retention and student success. Through data examination, the researcher identified common reasons leading to incompleteness of the dental hygienist program, and then determined if support from academic advising addressed

those issues. Furthermore, the researcher examined the completion rates of the dental hygienist program pre- and post- advising and determined whether or not a correlation existed.

If the research showed there was a correlation between academic advising and program retention, then administration could examine other health science programs to determine if academic advising could increase retention in those other programs as well. Positive indications from this study could spearhead a campus wide initiative regarding how students are supported across the college, and how services are offered. This study quantitatively compared two groups of dental hygienist program students, pre- and post- academic advising, and documented the retention rates in each group. Through careful evaluation of these results, administrators at NWTC could have the knowledge necessary to implement a new style of service that could result in students demonstrating more success in academics, retention and improved graduation rates.

Relationship of Background and Problem

Student retention had consistently been a problem for universities of all levels. There has been a substantial amount of evidence to support the theory that students who meet regularly with a program advisor felt more supported and therefore were more likely to be successful and complete their program. As retention issues continued to negatively affect both students and higher education institutions, research into possible solutions was necessary. Advising had enough preliminary research and supporting data to make it a viable candidate for a possible solution to retention concerns.

Research Questions

The research will follow the objectives listed below:

- 1) What were the student demographics of NWTC's Dental Hygienist program?

- 2) Identify the impact of Academic Advising on student retention and completion in NWTC's Dental Hygienist program.
- 3) Identify whether or not academic advising has increased program completion rates in Dental Hygiene.

Importance of Topic

This topic was important to the success of students and programs at NWTC. At a time where every budgeting dollar counts, neither NWTC nor students could afford to lose money due to poor practices. If through this study NWTC identified that students were more successful with the support of an academic advisor, then NWTC had potentially found a better way to serve and support students. It was possible that NWTC could secure additional funding to provide students with additional resources to assist them. Retention was a problem that has plagued higher education since its inception. It was time to investigate whether academic advising to specific programs could help counter act those previously determined negative effects.

Assumptions and Limitations

Prior studies were subject to a certain amount of assumption and limiting factors. This study was no exception. One limiting factor was the very nature of the targeted student population. Dental hygienist program students at NWTC were a very specific student demographic. This program was composed of predominately white females. The results of this project may only reflect the thoughts and feelings of this particular group, and therefore not have the same effects if implemented in a program with a different or more diverse student demographic. It is reasonable to assume that data gathered and results drawn from this research may only apply to this specific section of the student population.

Also, students utilize advising in different ways. It cannot be assumed that all students conducted traditional in-person advising appointments. Many chose to meet with their advisor in an alternative medium, i.e. through email communication or a phone call. These impersonal sessions may not have the same supportive affect and may not contribute to increased retention. Another limitation NWTC acknowledges would be the limited frame of reference for our students. Academic advising was considered to be a young model at NWTC and it may be too soon to judge its full impact on student success and retention.

Definition of Terms

Academic Advisor – suggest courses which are offered when a student is able (or wishes) to attend classes while meeting prerequisite and companion requirements and minimizing the time to get a degree (Santoso 2010, p. 287).

Intrusive Advising - involves some combination of recommended or required advising sessions for students on a regular basis; a predetermined set of goals to be accomplished in advising sessions (Schwebel, Walburn, Jacobsen, Jerrolds, & Klyce, 2008).

NACADA - The National Academic Advising Association (Cook, 2009)

Cooling Out - a “gradual disengagement” of a student from his/her professed academic goal, accomplished primarily through the substitution of lesser avenues of achievement perceived to be more appropriate to a given student’s preparation, skills, and abilities (Bahr, 2008, p. 705).

Humanistic Advising - ensure that their students saw them as human beings, rather than just staff at their college or university (Museus & Ravello, 2010, p.53).

Holistic Advising – an advising approach that serves the whole student. This approach considers the many unique advising needs for every student (Museus & Ravello, 2010, p.54).

Retention – tracking a fulltime student in a program to determine program completion.

Matriculation –enrolling in a student body or population within a college or university.

FTE – fulltime equivalent is used to measure how many fulltime students are supported and educated at NWTC.

Chapter II: Review of Literature

Introduction

The review of literature examined the history of academic advising. It also studied the historic retention problems in dental hygienist program, as well as the evolution of the program itself. This review also examined literature from other institutions with academic advising in place. It was imperative that Northeast Wisconsin Technical College determine the effect of academic advising on program retention in order to increase fulltime equivalents (FTEs) as well as continued to maintain a respected center of learning in the Green Bay community. The goal of this study was to determine the impact of academic advising on retention rates in the dental hygienist program. The researcher met the goals of this study by addressing key research questions regarding the demographics of the dental hygienist program, determining the impact of advising on retention and completing the dental hygienist program, and by identifying whether academic advising has had an impact on retention in the dental hygienist program.

History of Academic Advising

The profession of academic advising has been around since the inception of higher education in this country. The discipline of academic advising may not have been as predominant and professional as it is today, but students have always needed a staff person or mentor to guide them on their academic path. While the exact date and origin of this sector of student support was unknown, John Hopkins University had an established team of freshman faculty advisors as early as 1877 (Gordon, 2004, p.17). John Hopkins recognized a growing need for student advisement as program curricula developed and became increasingly complex (Gordon, 2004, p.17). Throughout the years, academic advising has grown into so much more. Although advising was literally defined as “the complicated process of guiding students through an academic career” (Champlin-Scarff, 2010), it was universally understood and expected that

advisors also assisted students in personal, moral, and other matters that fell outside of the classroom and outside their program of study (Cook, 2009).

Society recognized the growth in this field throughout the years, and in April 1977 The National Academic Advising Association (NACADA) was born (Beatty, 2009, p. 68). Fast forward to 2011 and academic advisors across the nation have access to services that have elevated their status in unprecedented ways. There were now national conferences and associations to a refereed journal, newsletters, a consultant bureau, standards, commissions, task force for current issues and more (Beatty, 2009, p. 69). In fact, academic advising, in some circles, was being viewed as a new career path for academics. The thought was that advisors needed to approach their area and field of study much in the same manner that a professor or administrator would; via the pursuit of academics (Hagen, 2008, p. 14). Grant Wiggins and Jay McTighe echoed those sentiments in their 2006 article. They stated, “For a school to be a model learning organization, all faculty members should be professional learners: they should engage in deep, broad study of the learning they are charged to cause” (p. 26).

In an interview published by the NACADA Journal in spring 2009, Dr. Harvey W. Wall described in detail what sets academic advising apart from other academic professions. As a Clinical Psychologist, Dr. Wall started in a counseling model at Penn State, and in 1973, recognized that the undergraduate students who he was seeing were not at all in need of mental counseling; they had just chosen the “wrong majors for the wrong reasons” (p. 57). Dr. Wall went on to discuss the professionalism of advising, and the growing need for its services in post-secondary education (p. 58). Dr. Wall stated, “Higher education and the choices confronting students have grown so complex as to demand specialists who can help students sort out what they want to do, and what they do best” (p. 58).

Although advising has come a long way over the years, its role in higher education was still not clearly defined. In many institutions the aspects of advising were not clearly laid out between advising staff and faculty (Trombley & Holmes, 2009, p. 48). In fact, the service end in post-secondary institutions were often so fragmented, that students were often given the “run-around”, or they were spoon fed some “institutional rhetoric” (Trombley & Holmes, 2009, p. 48). This was the sort of “rhetoric” and “run-around” that NWTC was trying to vanquish. Through mandatory advising support services, the hope was that students would receive consistent, non-disjointed information across the board which would assist them in taking the next step towards their success. Advising has grown and morphed since its inception in higher education. NWTC will continued to tweak and reexamine its advising services to ensure the focus remains on the student, and the outcomes that lead toward program success.

Due to the harsh reality of the global economy, it has been imperative that NWTC secure current funding at all costs. Retention was, and continues to be, a potential financial risk to post-secondary institutions across the country. Retention issues have affected all disciplines within the college. In an effort to counteract these retention problems NWTC has implemented new campus wide programs and initiatives that have targeted this very issue. Most of the new programs, i.e. mandatory academic advising sessions, mandatory program orientation sessions and mandatory learning inventories, were implemented in the fall 2011 semester and their success rates are still unknown.

In this continued economic depression, NWTC’s focus has remained on retaining current program students. Retention would be a continued focus for improvement at the college and in all disciplines within the college. Through programming and support services like academic

advising, NWTC hoped to break down barriers faced by some students and apply the tools needed for program completion.

The Evolution of Dental Hygiene

At NWTC, the dental hygienist program “prepares students to perform oral prophylaxis, apply preventative agents, expose radiographs, and teach patients oral care,” (NWTC Course Catalog 2010). Like most programs at NWTC, the curriculum was very hands on, and designed to give students real work experience before entering the workplace. All of the health sciences programs at NWTC were considered extremely competitive. Dental hygienist was no exception. In fact, if a student received a grade of “C” or below in a core class, the student would be placed on academic probation. If that same student earned another “C”; the student was dismissed from the program with no option for reentry. To avoid dismissal, students needed to be prepared for the expectations of the program. Proper preparation for this program began during high school. It has been proven that students with strong chemistry and biology grades during high school were more successful in this program (Monson and Cooper 2009). In an effort to assure preparedness of students for the rigor of the program, NWTC required successful completion of coursework in chemistry, biology, algebra and advanced math.

Despite its reputation for rigor, the dental hygienist program remained one of the most popular and sought after programs at NWTC. Interested students on average were wait-listed for two years prior to being accepted into the program. It is during that wait listed time that students were encouraged to focus on the general studies coursework. NWTC’s dental hygienist program director Sheila Gross (2011) stated, “General education courses provide the base for our program curriculum. We spiral off the information learned in the science courses. Examples would be the Dental Anatomy and Histology Course which uses General Anatomy and Microbiology as the foundation course for information. Bio-chemistry is another course that is needed prior to

Pharmacology so students understand the effects of the chemicals in drugs upon the human body.”

Current general education requirements included eight diverse courses. Recommendation of successful completion of these courses prior to program entry, or prior to starting “core classes” cannot be overstated. Not only would students be immensely overwhelmed attempting to complete general education courses in addition to their core classes; but they would also be underprepared. The general education classes were a necessary part of preparation for their program classes. If students have not completed the outlined courses beforehand, then they were lacking necessary skills and competencies going into their program. Chemistry, anatomy/physiology and speech were recognized as being the most important of their general education classes (Monson and Cooper 2009). NWTC’s General Education courses rounded out the dental hygienist curriculum, and ensured that students were getting all the knowledge and skills they needed to be successful in their program, and eventually, their career.

As is true for many things in this world, dental hygiene was born from need. The concept of preventative dental hygiene was first realized by pioneer dentists in the mid 1800’s who started to notice that oral cleaning, or “recall” appointments had positive impacts on patients overall health (Gladstone and Garcia 2007). This movement for prevention came about in response to people only coming to see their dentist when they were in pain. Collectively, dentists felt that by this point it was too late. They knew the future of dentistry was in preventative care (Gladstone and Garcia 2007). It was the early 1900s, before this idea was put into practice (Gladstone and Garcia 2007). Although there had been talk of a new niche in dentistry for a “dental nurse” or a “dental assistant”, it was not until 1902 that Dr. Cyrus Wright published an article outlining his idea for a new specialist (Gladstone and Garcia 2007). These

specialized women would work independently or alongside dentists, much as a trained nurse works alongside a physician, and would focus on the periodic removal of plaque from teeth, and preventative care (Gladstone and Garcia 2007). Dr. Wright was credited as being the visionary who truly saw the future of dental hygiene in dentistry (Gladstone and Garcia 2007). He certainly was not alone. Many dentists began to turn away from the “drill/fill/bill” focus, and started working toward prevention (Saunderson 2010).

Dental hygiene has seen its share of changes and advancements over the years. For example, in the early 1900s, just as dental hygiene was starting to gain some momentum, the only tools available for home care were toothpaste and animal hair toothbrushes (Gladstone and Garcia 2007). Silk floss was available, but not widely used (Gladstone and Garcia 2007). By the 1930s, dental hygienists were starting to get organized and due to the lower costs of toothbrushes and toothpaste, thanks to nylon, homecare was being practiced more frequently (Gladstone and Garcia 2007). In the 40s and 50s The American Dental Association (ADA) began to “establish curriculum and set standards for all dental hygiene programs” (Gladstone and Garcia 2007). Advertising for dental hygiene took to television, as popular ads featuring “Bucky the Beaver” and “Pepsodent” reached American’s across the country (Gladstone and Garcia 2007). The 1960s saw the introduction of “The Dental Hygiene National Board Exam”, continuing education requirements, the first electric toothbrush and preventative sealants for children (Gladstone and Garcia 2007). In the 1970s the number of dental hygiene schools in the USA dramatically increased (Gladstone and Garcia 2007). In the 1980s hygienists experienced a change in uniform, no more skirts and caps, and after the discovery of HIV/AIDS, saw radical changes in sterilization and personal protection equipment (Gladstone and Garcia 2007). In the

90s until today, the most dramatic changes and evolutions in the field were from advancing technologies and the introduction of different computer software (Gladstone and Garcia 2007).

While retention may be a hot button issue, enrollment has never been a problem for this program. Since its inception at NWTC in 1977, the dental hygienist program has always attracted students. Unfortunately, it only seems to attract one type of student – white females. There has been virtually no change in the student demographic in this program from its inception to present. The profile of only white females being attracted to the dental hygienist program was not a problem unique to NWTC. Statistics from schools across the nation showed the same trends. There was a theory that some minority populations had less access to dental care and therefore less exposure to careers in dentistry (Onick 2009). There were not only race barriers in this program; gender barriers existed as well. The first male dental hygienist in this country did not graduate until 1965 (Gladstone and Garcia 2007), and at NWTC there has only been a small handful of men to complete the program in the 30 year history. A goal at NWTC was that as the population continued to diversify, these statistics would begin to trend differently; and eventually the student demographic would more accurately represent a diverse student population.

Retention has become a national and a local issue. On the local level, low retention rates have added additional strain to already strained public resources such as unemployment and food stamps. If individuals do not complete their academic program and do not receive a credential, they are less likely to gain fulltime employment and contribute to the community via taxes. This has been happening on a larger scale nationally. Poor national retention rates have signified that an economic turnaround is unlikely in the near future. Retention has to remain a topic of discussion, at local schools and national universities.

Summary

There has been much research and conversation surrounding the possible link between academic advising and its impact on student retention in post-secondary education. The intent of this study was to determine if such a correlation exists, and all possible impacts academic advising could have on student success and retention rates within the dental hygienist program at NWTC.

Student success is the mantra embodied by administrators as well as the legislation in CTE. Now more than ever leaders in this field needed to focus on remaining financial resources and re-evaluate how they could benefit students. If there was a correlation between improved retention rates and academic advising, then NWTC needed to know. Through this study, NWTC intended to flesh out the truth regarding this supposed correlation, and capitalize on any benefits that could be provided to students.

Chapter III: Methodology

Introduction

The methodology section presents the procedures and methods used to complete this study. This section took an in depth look at the population examined, the source of the data and the methods of data examination. The purpose of this study was to identify whether or not academic advising services had an effect on student retention within NWTC's dental hygienist program. The goal was to evaluate the potential impact of academic advising services on student success and evaluate possible implementation of advising services on all programs at Northeast Wisconsin Technical College. The instrumentation designed included an ex post facto study of the dental hygienist students during the years 2004-2011. The researcher used the data to examine demographics of the student population and retention rates from each year. The data collected from this study may lead to recommendations to make academic advising mandatory for all programs at NWTC.

Design

To successfully address the previously outlined research questions, existing data at Northeast Wisconsin Technical College was analyzed. The researcher conducted ex post facto research to examine retention data on dental hygienist students between 2004 and 2011. Using EdWare software, the researcher was able to examine demographic information and retention rates within the dental hygienist program at NWTC. To address the first research objective, the researcher looked at the dental hygienist student population between 2004 and 2011. Student demographic information such as gender, race and age were documented and recorded. The researcher focused on analyzing the demographics of the dental hygienist program each year to ensure that the population being examined remained relatively constant.

To answer the second research objective the researcher looked at dental hygiene retention information and statistics from 2004–2011 by semester. The data was plotted into three separate tables by semester: summer, fall and spring, and the retention statistics for each term were recorded. All data regarding retention rates was examined and recorded by the researcher. The data was placed in a table format so the data by semester could easily be compared. This data was collected by ex post facto research methods. The researcher used EdWare software at NWTC to query and search out retention rates in the dental hygienist program by term. Each semester: summer, fall and spring, for the years 2004-2011, were queried, examined and all data recorded.

To answer the final research objective the researcher examined data regarding program completion rates among student dental hygiene cohorts at NWTC. The researcher documented all information regarding the program completion rates as well. All data obtained was analyzed and plotted as a table or a figure for clarity. All data sets were then compared and contrasted in order to evaluate whether or not the newly implemented academic advising model at NWTC has had an impact on retention within NWTC's dental hygiene program. No independent research or surveys were created or issued by the researcher for this project. Only pre-existing, ex post facto data was collected and analyzed for the purpose of this report.

Selection of Sample

The sample selected for this study was NWTC dental hygienist students who attended NWTC between 2004 and 2011. The researcher used an NWTC public software system to search the dental hygienist students enrolled at NWTC in the years mentioned. All data examined for the purpose of this research project came from past and current dental hygienist students at NWTC. The ex post facto data examined contained information on retention and

persistence rates as well as demographic information for the aforementioned NWTC dental hygienist program students. Students in the sample were selected on one criterion only; they were enrolled in NWTC's dental hygienist program between 2004 and 2011.

Description of Sample

The population for this study consisted of 134 female students and 3 male students in the NWTC dental hygienist program during the years 2004-2011. The sample for this study consisted of both first and second year dental hygiene students. Minority students have not had a strong influence on the demographics. Three out of 134 female students were non-white. The students in the sample ranged in age from 18-42; with the majority of the students between 18-25 years of age. The population sample researched were majority young white females with varying backgrounds relating to work and family obligations.

Instrumentation

The instrumentation was designed specifically for this study to answer the following research objectives:

- 1) What are the student demographics of NWTC's Dental Hygienist program, and has the program undergone any major changes that could influence retention?
- 2) Identify the impact of Academic Advising on student retention and success in NWTC's Dental Hygiene program.
- 3) Identify whether or not academic advising increased program completion rates in Dental Hygiene and should be mandatory for all programs at NWTC.

All data analyzed to answer these questions came from EdWare software at Northeast Wisconsin Technical College. Using this data, the researcher formulated questions that would address the research objectives outlined above. The researcher queried out all dental hygienist

students that attended NWTC between 2004 and 2011. The researcher then looked at information within that data set pertaining to student demographic; i.e. gender, age and race, and also enrollment and persistence information. The researcher recorded the data using EdWare software and then organized the data into tables. This allowed for the researcher to make analysis based on the compared and contrasted information. This ex post facto research allowed the researcher to answer the research objectives.

The researcher also examined data pertaining to program curriculum and program faculty within the dental hygienist program at NWTC. The researcher used data to answer the following questions about the structure, stability and consistency of NWTC's dental hygienist program between 2004 and 2011. Were there any major curriculum changes between 2004 and 2011 that would significantly impact retention? Is there frequent turnover of instructors for this program? What is the level of education required by fulltime faculty in this program? The researcher used this data recovered from ex post facto research to determine whether or not faculty or curriculum changes between 2004 and 2011 could have had an impact on student retention.

Data Collection

All data was collected from the NWTC intranet site. The internal database is an information gathering system used to collect the data represented in this report. EdWare is a software program used by NWTC to track all information on past and present students and programs. Administrators at the college use EdWare software to run reports on student activity, retention, demographics and more. The information gathered in EdWare reports were highly regarded and often the basis for college wide decisions on retention and programs. The researcher was able to gather all necessary data from EdWare to address the research questions posed. To secure the data the researcher worked with the Institutional Researcher at NWTC. To

prevent recording error, the researcher printed all facts and figures on to a hard copy file. The researcher then created all tables by hand first before inputting the data into the computer. In each stage of development, the tables were checked three times to ensure accuracy and validity. The researcher had all information checked again by the Institutional Researcher at NWTC.

Data Analysis

The independent variables in this study were gender, age and contact with an academic advisor. The dependent variables were the faculty and curriculum in the dental hygiene program at NWTC, which has not changed within the last ten years. All students in the dental hygienist program in the years examined would have been exposed to the same teachers and same curriculum. The variable examined was the implementation of the academic advisor to the program in 2008. Data was analyzed to decipher whether this new role in the program had a significant impact on student retention. The information examined from the data set was constructed into tables. These tables were used to illustrate the impact that the advising model has had on retention within the dental hygienist program. The researcher created three tables and labeled them as summer, spring and fall term. Each table was then broken down by year, and the retention rate for each year by semester was documented. The retention percentage is based off the number of students in the initial cohort vs. the number of students that completed the program.

Limitations

The researcher acknowledges that there were limiting factors to this study. One limiting factor could be identified as the lack of diversity in the dental hygienist student population. The student demographic information found in the dental hygienist program was very specific. Therefore, it was reasonable to assume that the data analyzed only applied to this specific

segment of the student population, and therefore results cannot be applied to other programs and student populations without further study. A second limiting factor could be examining the data instead of conducting personal interviews with past and current students. The numbers can be examined to very clearly demonstrate a trend in retention either one way or another; however personal interviews with students may shed more light on their perceptions of the academic advising model and whether or not it had an impact on their success, or lack thereof, in the dental hygienist program. A third potential limiting factor could be “newness” of the academic advising model at NWTC. The model was first implemented at the college in fall of 2006. The dental hygienist program was not assigned a program advisor until the summer cohort of students in 2008. The academic advising team is still young and still developing their methods and best practices for working with program students at the college. It was reasonable to assume that the trends indicated by the data in this report may change in years to come as the academic advisors perfect their craft and further develop relationships with their program students and faculty at the college.

Chapter IV: Results

Introduction

The purpose of this study was to determine whether the addition of the academic advising model at NWTC has had an impact on student success and retention within the dental hygienist program. To answer this question, the researcher examined data on past and present dental hygienist program students using EdWare technology at NWTC. More specifically, the researcher examined existing data on student demographics, program curriculum, program faculty and numbers related to retention. Studying data related to program demographics allowed the researcher to identify the student population in question. Demographic data enabled the researcher to identify the specific type of student in the dental hygienist program and to determine the diversity within the program. Examining information on courses within the curriculum years studied allowed the researcher to determine if any major changes to the program were made that would significantly impact the validity of this study. Data related to the faculty involved with the dental hygienist program was examined as well. This data was also examined to determine if there were any major faculty changes that would have also had an impact on student retention in the program during those same years mentioned.

Lastly, the researcher evaluated data pertaining to the program retention rates and numbers within the dental hygienist program. First, the researcher examined program persistence by term. The retention percentage in this data was equal to the number of enrollments for the term plus the graduate total for the term, and then divided by the initial cohort. Currently active students were equal to the number of currently active students in the previous term minus the graduates and the withdrawals from the previous term. Examination of this data allowed the researcher to observe trends in enrollment from term to term. Examination

of that data over the course of several years enabled the researcher to document trends and observations regarding retention in the dental hygienist program with and without an academic advisor.

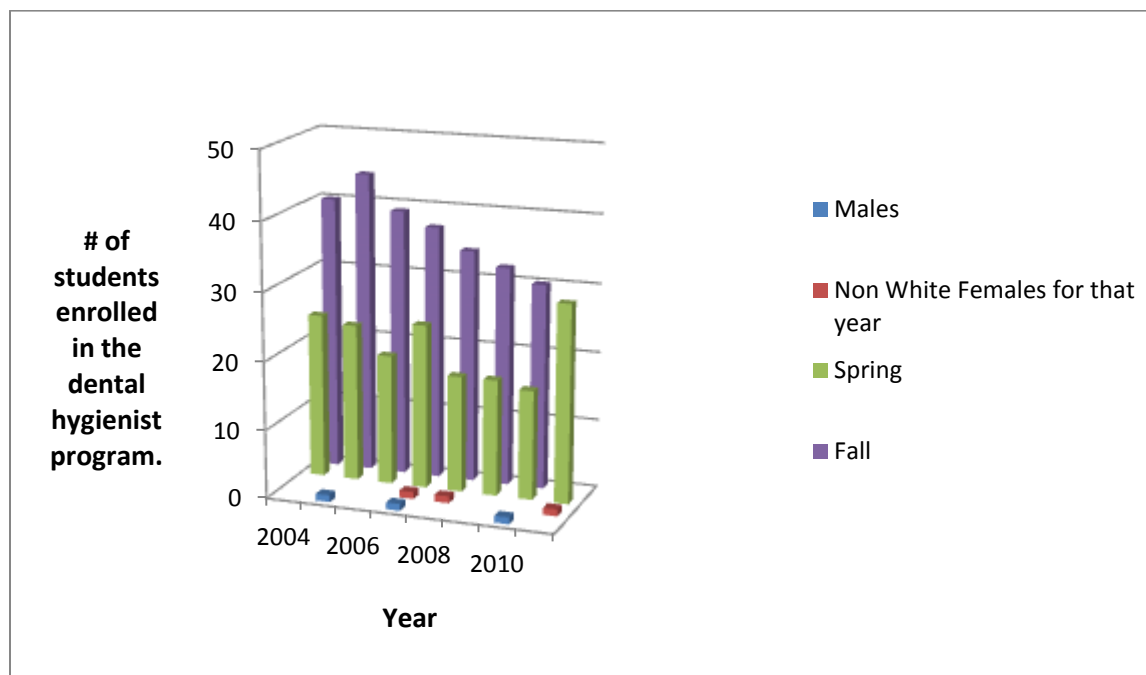
Results

As a result from the research, the following research questions were addressed. These questions were answered by conducting an ex post facto study of data at Northeast Wisconsin Technical College. The researcher gained access to software reserved for administrators and team leaders. The software programs contained facts and figures involving all students, past and present, and all programs offered at NWTC. Using carefully designed searches and queries, the researcher was able to gather sufficient data to address the research objectives for this project.

What are the student demographics for NWTC's Dental Hygienist program, and has the program undergone any major changes that could impact retention?

The first research question addressed by this study was to identify trends and patterns in the Dental Hygienist student demographic. The researcher discovered that knowledge surrounding race and gender lend valuable insights into the population being studied. EdWare software allowed the researcher to document the trends in demographics from 2004 – 2011. To obtain this data, the researcher looked at information depicting white vs. non-white females and male vs. female students from 2004 – 2011. The results of this data collection are pictured in the figure 1 below:

Figure 1 – Trends in Demographics



As clearly stated in Figure 1; the dental hygienist program is dominated by white females. The graphic showed the enrollment in the dental hygienist program by semester. The green columns showed enrollment trends for the spring term and the purple columns showed the enrollment trends from the fall terms. In 2004, there were 24 white females enrolled in the spring term, and 40 white females enrolled in the fall term. In 2005 there was one male student enrolled in the cohort, 23 white female students in the spring and there were 44 white female students in the fall term. In 2006 there were 19 white female students enrolled in the spring term and 39 white female students enrolled in the fall term. In 2007 there was one male student, one non-white female student and 24 white female students in the spring term. There were 37 white female students enrolled in the fall 2007 term. In 2008 there was one non-white female enrolled in the cohort, and 17 white female students in spring, and 34 white female students in the fall term. 2009 had 17 white female students enrolled in the spring term and 32 white female students enrolled in the fall term. In 2010 there was one male student enrolled in the cohort.

There were 16 white females enrolled in the spring and 30 white females enrolled in the fall. The 2011 school year had one non-white female enrolled in the cohort, along with 29 white females in the spring term.

The bottom axis showed the year for the semester being examined. The blue columns denote the male students that were enrolled in any given year and the red columns denote the number of non-white female students enrolled in any given year. In the years outlined in figure 1, there have only been two male students enrolled in the program and only three non-white (female) students. Non-white and non-female students make up 4.3% of the entire dental hygienist students population studied between 2004 and 2011. Male students and non-white female students make up 2.1% of the population each, for a combined total of 4.2%. White females in dental hygiene at NWTC make up the remaining 96%.

As part of the study, the researcher ran a demographic query using NWTC software. This query utilized data from PeopleSoft; another program used to house and store student and program information at NWTC. The researcher constructed a query that would successfully identify the demographic of the students in the dental hygienist program from 2004-2011. Figure 2 below represents the demographic data for the dental hygienist program from 2004-2011:

Figure 2 – Student Population Demographics

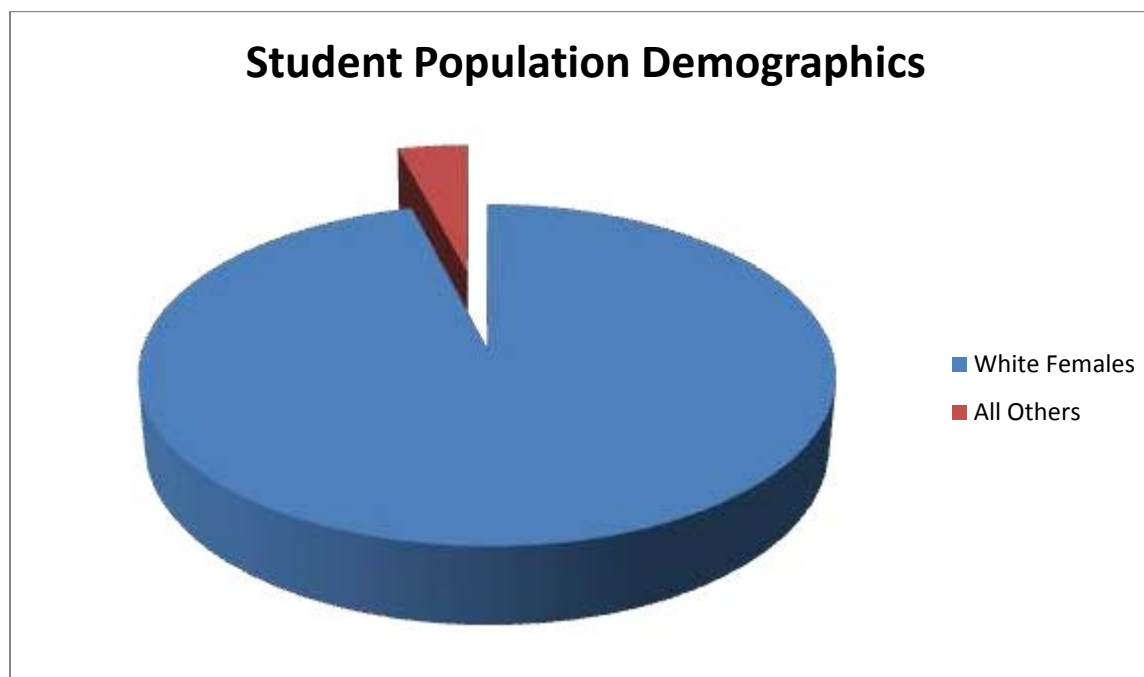


Figure 2 represents and supports the findings depicted by figure 1. This graphic was constructed to show that 96% of students that were enrolled in NWTC's dental hygienist program between 2004 and 2011 were white females. A total of 131 students were white females, 3 students were non-white females and 3 students were males, for a total of 137 students in the dental hygienist program. The remaining 4% of the student demographic was male students and non-white female students.

The second half of this research question involved exploring data pertaining to program curriculum and program faculty in the Dental Hygienist program. All data regarding faculty within the Dental Hygienist program was obtained from the Health Science Divisional Office at NWTC. Five years ago NWTC had four fulltime instructors, but due to a retirement there are currently three fulltime instructors. All the instructors currently employed by the program have been working in the Dental Hygienist program for greater than ten years.

Northeast Wisconsin Technical College currently employs (on average) between five and six adjunct faculty each semester to cover all classes taught in this program. To be a full time faculty member in this program, instructors must hold a bachelor's degree, Registered Dental Hygienist, RDH, and Central Regional Dental Testing Service, CRDTS, certifications, and a minimum of two years direct work experience as either a dental hygienist or a dental nurse. However, research showed that all NWTC's fulltime faculty have master's degrees and over twenty plus years in the field (see Table 1). All have maintained their licensures and certifications. This is an important trend to note. Not one of the fulltime instructors simply meets the minimum standards for hiring. All of the dental hygiene instructors are at the top of their field. This level of competition is a trend that will only increase in the future.

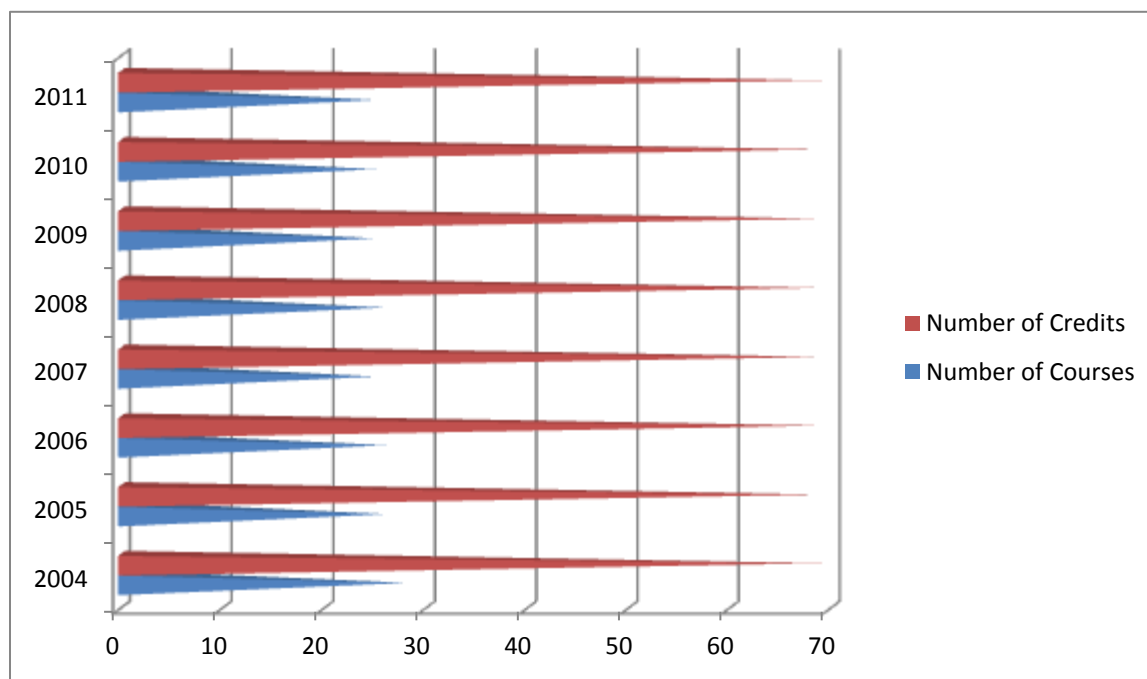
Table 1 – Faculty Data

Instructor Name	Program Status	RDH	CRDTS	AD	BS	MS	Years in the Field	Years at NWTC	Maintain Licensure?
Faculty #1	Fulltime	√	√	√	√	√	20	14	√
Faculty #2	Adjunct	√	√	√	√	√	25	10	√
Faculty #3	Fulltime	√	√	√	√	√	30	12	√
Faculty #4	Adjunct	√	√	√	√	√	25	11	√

Examining course data over the last ten years it is evident that unlike the demographics, courses have not remained stagnant. The curriculum has been consistently changed to meet the demands of the job market and the community. Over the last eight years, courses have been tweaked and modified. The researcher observed no major changes to the curriculum in the years examined, 2004-2011. See Figure 3 for the complete listing of the dental hygiene curriculum by

year. The figure below encapsulates the changes discussed in the Dental Hygienist course work. All data for this figure was obtained from NWTC course catalogs from 2004-2011.

Figure 3 – Trends in Courses



The figure above depicts the lack of change in the dental hygienist curriculum over the last eight years. The credit number has not significantly changed, nor has the total number of classes that students are required to take for the NWTC dental hygienist program.

Is there an impact by Academic Advising on student retention and success in NWTC's Dental Hygienist program?

The second research objective was aimed at determining the strength and depth of impact on the dental hygienist program by the academic advising model at NWTC. To answer this question, the researcher conducted an ex post facto study and utilizing existing student data, this information was organized into tables. The tables are separated by semester and they record retention information from 2004 through 2011. The tables document the year, the initial cohort,

active students, graduates, withdrawals and overall retention percentage. As displayed in Table 1, summer term, the dental hygienist cohort began in summer 2004 with an initial cohort of 13 students. In 2005 the NWTC started a cohort of 21 dental hygienist students. Withdrawals occurred in the summers of 2005 with one of 21, 2007 with one of 18, 2010 with three of 14 and 2011 with two of 17. The summer term saw the most withdrawals in the years of 2010 and 2011 when the dental hygienist program had an academic advisor.

In 2004 there were 13 students enrolled in the cohort and 13 active in their program. The summer 2004 semester had a 100% retention rate. Years 2006 2008 and 2009 also maintained their full cohort and had a 100% completion rate for the summer term. In the summer term of 2005 and 2007, one student withdrew from each cohort. The summer term of 2010 saw three student withdrawals and the summer term of 2011 had 2 student withdrawals. The decreased retention rate was not reflected until the fall semester for each year given.

Table 2 – Summer Term

Summer Term							
Year	Initial Cohort	Active in Term	Enrlmt	Grad Total	Retention %	Graduated	Withdrawals
2004	13	13	13	0	100	0	0
2005	21	21	21	0	100	0	1
2006	21	21	21	0	100	0	0
2007	18	18	18	0	100	0	1
2008	16	16	16	0	100	0	0
2009	17	17	17	0	100	0	0
2010	14	14	14	0	100	0	3
2011	17	17	17	0	100	0	2

In the fall term of 2005, two students withdrew from the program; in the fall of 2009 one student withdrew. The fall term saw more withdrawals in a year when the dental hygienist program did not have an academic advisor. The fall term also saw decreases in retention percentages in 2005 of 4.76%, 2006 of 4.76%, 2007 of 5.56%, 2010 of 21.43% and 2011 of 11.76%. These decreased percentage rates are due to student withdrawals from the previous semester. The summer term in 2005 lost one student to a withdrawal. The fall 2005 semester therefore only had a retention percentage rate of 95.24%. Also 2006, 2007, 2010 and 2011 lost students in the summer term, and had a decrease in fall retention rates as a result. In 2006 the retention rate was at 95.24% and in 2007 the retention rate was 94.44%. The most significant drop in retention occurred in 2010 and 2011; both years when the dental hygienist program had an academic advisor. In 2010 the student retention rate saw its lowest point at 78.57% and there was a slight improvement in fall 2008 when retention climbed back up to 88.24%.

Table 3 – Fall Term

Year	Fall Term						
	Initial Cohort	Active in Term	Enrlmt	Grad Total	Retention %	Graduated	Withdrawals
2004	13	13	13	0	100	0	0
2005	21	20	20	0	95.24	0	2
2006	21	21	20	0	95.24	0	0
2007	18	17	17	0	94.44	0	0
2008	16	16	16	0	100	0	0
2009	17	17	17	0	100	0	1
2010	14	11	11	0	78.57	0	0
2011	17	15	15	0	88.24	0	0

One student withdrew in the spring terms of 2005, 2006, 2007, 2008 and 2009. In this term, three out of the five withdrawals happened in a year when dental hygienist students did not have a program advisor. This term also saw a decrease from 100% in retention in 2005, 2006, 2007, 2009, 2010 and 2011. In the spring term of 2005 retention dropped to 85.71%. In spring 2006 retention had come back up to 95.24% and in spring 2007 retention was at 94.44%. Spring 2009 also saw high retention rates at 95.24%, but rates started to decline after that. The biggest spike in retention was in spring 2010 and spring 2011 respectively. Spring 2010 saw a retention rate of 78.57% and 2011 had a retention rate of 82.35%. These are both years when dental hygienist students had an academic advisor assigned to their program. The third biggest decrease in retention was in spring 2005, a year when dental hygienist students did not have an academic advisor assigned to their program.

Table 4 – Spring Term

Year	Spring Term						
	Initial Cohort	Active in Term	Enrlmt	Grad Total	Retention %	Graduated	Withdrawals
2004	13	13	13	0	100	0	0
2005	21	18	18	0	85.71	0	1
2006	21	21	20	0	95.24	0	1
2007	18	17	17	0	94.44	0	1
2008	16	16	16	0	100	0	1
2009	17	16	16	0	94.12	0	1
2010	14	11	11	0	78.57	0	0
2011	17	15	14	0	82.35	0	0

The data reflected in the three tables above show improved rates of retention prior to the introduction of an academic advisor the dental hygienist program at NWTC. It is also important to note that the size of the initial cohort every year in the program changes based on availability, clinical sites, and transfer and re-entry students.

Has academic advising increased program completion rates in the dental hygienist program and should advising be mandatory for all programs at NWTC?

The last research objective focused on program completion rates per each cohort that started at NWTC from summer 2004 through summer 2011. The last two cohorts in the population studied began their dental hygienist program at NWTC in summer 2010 and summer 2011 respectively. The cohort that began in the summer of 2010 was expected to graduate spring of 2012 and the cohort that began in summer of 2011 will graduate in spring 2013. Since the graduation information for these last two cohorts have not been reported yet, their portion of program completion information in Table 5 will remain incomplete. The data in Table 5 focuses on the completion rate of the entire dental hygienist cohort. The information provided here examined a portion of the student population studied and focused on their two year program. This section did not focus on retention statistics from each individual semester. This section examined two year dental hygiene student cohorts.

Table 5 – Program Completion

Year	Program Enrollment	Program Completion	Program Non- Completions	Program Completion Rate	Program Non- Completion Rate
2004	13	12	1	92.31%	7.69%
2005	21	16	5	76.19%	23.81%
2006	21	17	4	80.95%	19.05%

2007	18	14	4	77.78%	22.22%
2008	16	14	2	87.50%	12.50%
2009	17	15	2	88.24%	11.76%
2010	14	11	3	TBA	TBA
2011	17	15	2	TBA	TBA

The 2004 dental hygienist cohort at NWTC experienced a 92.31% completion rate with 12 of 13 students in the cohort graduating. In 2005, the program completion rate dropped to 76.19% or 16 of 21 students in the cohort graduating. In 2006, the program completion rate was back up to 80.95% with 17 out of 21 program students graduating; however it was back down again in 2007 at 77.78% with only 14 out of 18 program students graduating. In 2008 the program completion rate was back up to 87.50% with 14 out of 16 students in the cohort graduating and in 2009 it was slightly higher at 88.24% when 15 out of 17 program students graduated. The cohorts for both 2010 and 2011 have not graduated yet, therefore their program completion rates cannot be determined at this time.

The data recorded in this table demonstrated a clear improvement in program completion from 2007, the last year without an academic advisor, to 2008, the first year with an academic advisor. The highest completion rate occurred in 2004; however the second and third highest completion rates occurred after an academic advisor had been integrated into the program. Program completion rates increased by 9.72% during the first year that advising was working with dental hygienist students. The second cohort to graduate from the dental hygienist while working with an advisor occurred in 2009. Students in 2009 enjoyed a 10.46% increase in program completion over students without an advisor in 2007.

The research also showed that the three highest rates of program non-completion occurred when there was no academic advisor assigned to the dental hygienist program. It is also important to note that the two active cohorts in dental hygienist at NWTC right now have not graduated and therefore are not recorded in this table.

Summary

The results of this study indicated that academic advising has had a positive impact on the dental hygienist program at NWTC. Retention rates ranged from 77.78% - 88.24% during this time. The advising model is still very new, but retention and program completion statistics are trending in a positive direction. The ex post facto research methods applied by the researcher successfully answered all research objectives. The researcher observed that the student demographic in the dental hygienist program at NWTC has remained consistent throughout the years examined, 2004-2011. The majority of students enrolled in that program have been white females. The researcher also observed that the dental hygienist curriculum has not undergone any major changes in the years studied, nor have there been any major changes to the faculty in the program. The fulltime faculty members in the program are all very well educated, certified and qualified.

Table's 2-4 documented retention per semester in 2004-2011. That data showed a varying rate of retention percentages by semester. The variance in this table most likely came from the initial cohort number. Each year in the dental hygienist program, a different number of students start in a cohort. This variable may be the reason that some years have higher retention rates than others. Some cohorts had a significantly larger student number than others. The researcher also observed the program completion information exhibited in Table 5 documented

an almost 10% increase in program completion since the integration of an academic advisor into the dental hygienist team.

In conclusion, academic advising has had a positive impact on student retention in the dental hygienist program at NWTC. Since the integration of an advisor into the program in 2008, program completion is up by 10%. It is important to note that the advising program is still new to the dental hygienist program, and will need to be observed for more years in the future before a true assessment can be made.

Chapter V: Discussion

Introduction

The purpose of this study was to evaluate the effectiveness of academic advising as it relates to retention in the dental hygienist program at NWTC. More specifically, this study examined the dental hygienist program at Northeast Wisconsin Technical College (NWTC) in order to determine if academic advising had any influence on retention and student success. Determining the impact of advising on student success and retention in a program could help administrators determine whether this would be an effective retention strategy for other programs at the college. The data collected from this study may lead to recommendations for making academic advising a mandatory service for all NWTC program students.

The research design consisted of ex post facto research aimed at answering 3 specific research objectives:

- 1) What were the student demographics of NWTC's Dental Hygienist program?
- 2) Identify the impact of Academic Advising on student retention and completion in NWTC's Dental Hygienist program.
- 3) Identify whether academic advising has increased program completion rates in Dental Hygiene.

This paper had discussed a brief history on academic advising and presented a case for the problem of retention in NWTC's dental hygienist program. The literature revealed that academic advising has been around, in one form or another, since the inception of higher educational systems in this country. Advising was defined as "the complicated process of guiding students through an academic career" (Champlin-Scarff, 2010). Academic planning has been a huge part of the advising profession, but it has grown into so much more. Studies have

shown that students need “guidance in personal, moral, and intellectual matters beyond the scope of their classroom studies” (Shaffer, Zalewski, & Leveille, 2010; Cook 2009). The researcher observed through data examination that there is truth in that statement. Students do not complete a course or a program for many reasons. Giving students a support person to guide them through academic challenges may help students stay focused and on track in programs.

The researcher conducted ex post facto research to examine retention data on dental hygienist students between 2004 and 2011. Using EdWare software, the researcher was able to examine demographic information and retention rates within the dental hygienist program at NWTC. The researcher used EdWare software at NWTC to query to search out retention rates in the dental hygienist program by term. Each semester, summer, fall and spring during the years 2004-2011 were queried, examined and all data recorded. The researcher documented all information regarding the program completion rates as well. All data obtained was analyzed and plotted as a table or a figure for clarity. All data sets were then compared and contrasted in order to evaluate whether the newly implemented academic advising model at NWTC has had an impact on retention within NWTC’s dental hygiene program. No independent research or surveys were created or issued by the researcher for this project. Only pre-existing, ex post facto data was collected and analyzed for the purpose of this report.

Limitations

The researcher acknowledges that there were limiting factors to this study. One limiting factor was the very nature of the targeted student population. Dental hygienist program students at NWTC were of a very specific student demographic. This program was composed of predominately white females. The results of this project may only reflect the thoughts and feelings of this particular group, and therefore not have the same effects if implemented in a

program with a different or more diverse student demographic. It is reasonable to assume that data gathered and results drawn from this research may only apply to this specific section of the student population, and therefore results cannot be applied to other programs and student populations without further study.

A second limiting factor could be examining the data instead of conducting personal interviews with past and current students. The numbers can be examined to very clearly demonstrate a trend in retention either one way or another; however personal interviews with students may shed more light on their perceptions of the academic advising model and whether it had an impact on their success, or lack thereof, in the dental hygienist program.

Also, students utilize advising in different ways. It cannot be assumed that all students conducted traditional in-person advising appointments. Many chose to meet with their advisor in an alternative medium, such as through email communication or a phone call. These impersonal sessions may not have the same supportive affect and may not contribute to increased retention.

Another limitation NWTC acknowledges would be the limited frame of reference for our students. Academic advising was considered to be a young model at NWTC and it may be too soon to judge its full impact on student success and retention. The model was first implemented at the college in fall of 2006. The dental hygienist program was not assigned a program advisor until the summer cohort of students in 2008. The academic advising team is still young and still developing their methods and best practices for working with program students at the college. It is reasonable to assume that the trends indicated by the data in this report may change in years to come as the academic advisors perfect their craft and further develop relationships with their program students and faculty at the college.

Summary

The first research objective examined was aimed at discovering the student demographics of the dental hygienist program between 2004 and 2011. The student demographics of NWTC's dental hygienist program have remained consistent throughout the 2004-2011 academic school years. The majority makes up 96% of the total student demographic. This majority population consists of white females, ages 18-42. The mean age of the white female students were between 18 and 25. The remaining 4% of the student demographic was split between male students and non-white female students. This 4% can be broken down further into six individual students. Three of the six students were males, ages 22, 26 and 39. The remaining three students were non-white females, ages 19, 22 and 26. The data clearly demonstrated that the vast majority of dental hygienist program students at NWTC were white females ages 18-25. This was a very specific student population, and all data produced from this group may only reflect the needs and styles of this population. Data obtained here should not be applied to other programs with a more diverse student demographic.

The dental hygienist program has not undergone any major changes between 2004 and 2011. The courses in the curriculum have experienced minimal changes, meaning students that were enrolled in 2004 took essentially the same schedules as new students in 2011. This eliminated a variable in the retention equation. Students have consistently been enrolled in the same classes, taught by the same instructors. This eliminated the possibility of students being unsuccessful in a program due to a fluke hard class, or poor teaching. The data demonstrated that the dental hygienist instructors have all been teaching within the program for at least ten years. The fulltime faculty in this program all have graduate level credentials and have maintained their dental hygienist licenses. Dental hygienist students that were enrolled between

2004 and 2011 experienced consistent program classes and quality instructors. Neither course curriculum nor instruction would have skewed the data or negatively impacted program completion or retention.

The goal of the second research objective was to identify the impact of academic advising on retention and completion in NWTC's dental hygienist program. To answer this question, the researcher examined retention rates from 2004-2011 by term; summer, fall and spring. When the data was broken down by semester, it was harder to see a clear impact by advising on retention. On average, student withdrawals happened more frequently during 2004-2007 than between 2008-2011. However, there were more student withdrawals between 2008 and 2011. The 2004 and 2007 dental hygienist cohort had 7 students withdraw in 6 semesters. The 2008 and 2011 dental hygienist cohort saw 8 students withdraw in 5 semesters. The latter cohort went through the dental hygienist program when students had an assigned academic advisor. The data shows that the advising model may have had a small impact on retention by semester; however it is important to note that advising is a new model to the dental hygienist program and to the college, and more time should be spent observing the advising model before decisions are made based on their practices.

The third research objective was to identify whether or not academic advising had increased program completion rates in dental hygiene. Academic advising has had a positive impact on dental hygiene program completion at NWTC. Based on data found in Table 5, program completion in the dental hygienist program has increased by almost 11% since the implementation of the academic advising model at NWTC. The academic advising model was a new addition to dental hygiene and to NWTC. The data has shown promising results regarding

retention and program completion. More development into advising and advising practices need to be developed and observed.

Conclusions

The results indicated that academic advising has had a positive impact on student success and retention within the dental hygienist program at NWTC. The researcher bases these findings on the data reported in the previous chapter. After examining data regarding the student demographics, the researcher noted the research had conclusively proved that the demographic of the dental hygienist program at NWTC has not changed over time and should not be a variable factor in retention.

In that same vein, the curriculum required by all dental hygienist students had not experienced any major changes between 2004 and 2011. Changes in number of courses required by the dental hygienist program over the years are a variable that could have influenced student retention. According to Figure 3, the dental hygienist curriculum has remained stagnant over the last eight years. Since all students experienced virtually the same curriculum; program rigor was also not a variable impacting retention in the dental hygiene program.

The teacher's in the program do not seem to be a variable here either. The data reflected that all fulltime faculty members have been with the program for greater than ten years. Also, all the fulltime instructors have master's degrees, certifications and 10 years in the field. Quality of the instructors would not have negatively impacted retention during the last eight years in dental hygiene.

The data regarding retention percentages by semester showed that the dental hygienist program loses students throughout the year. This is most likely due to the competitive nature of the program and the high grades required to stay in the program. When examining retention by

semester, there was not a clear cut answer as to whether academic advising had increased student success and retention. However, when going over data regarding program completion; meaning the query is looking at students by cohort, not by semester, advising clearly had an impact on retention and student success in dental hygienist.

Even though the data from Table 5 indicates that advising was having a positive impact on retention, that data cannot be the basis for any formal recommendations. The current two cohorts of students that are active in dental hygienist right now at NWTC have not graduated, and therefore their latest program completion rates have not been studied or evaluated. Both of these cohorts have experienced more than one student withdrawal; no assumptions can be made until all data has been reported. The data in this table indicates a positive trend towards program completion; however, until all data is reported, it is too early to draw any conclusions.

In conclusion, “evolutionary educational changes, the development of entry to practice standards, and recognition of dental hygiene as a self regulating profession contribute to the ongoing professionalization of dental hygiene,” (Grater-Nakamura 2010). Meaning, this is an exploding field in the health sciences which is constantly changing to remain competitive and to fill the need in our community and society. Dentistry has seen many changes over the past century, and will continue to evolve and experience more changes as NWTC evolves to a higher level of technology, education and practice. Although advising seems to be having a positive impact on the students within the NWTC dental hygienist program, academic advising should not automatically be instituted within every program at NWTC. The dental hygienist program has a very specific student demographic. It could be that academic advising works really well for white females, and not very well for white males. NWTC needs to conduct more research to find out the full impact of academic advising on retention in all student demographics.

Recommendations

The following recommendations have been made based on the findings and conclusions drawn from this study:

- 1) More research is needed. The researcher does not recommend implementing academic advising as a college wide or mandatory service for program students at NWTC. The academic advising model is simply too young and inexperienced right now. This study was the first of many that administrators at NWTC should consider on the subject of academic advising and retention. There has not been enough research done on this topic to make sound judgments at this time.
- 2) NWTC should continue developing their academic advising model. It has already experienced success and improved retention in its short tenure at the college. However, NWTC needs to conduct more studies and collect more data to ensure that academic advising is using best practices when working with students and also to ensure that there is a correlation between program completion and retention.
- 3) NWTC should pilot other programs geared at increasing student retention. The academic advising model has shown great promise in this study, but administrators need to keep their minds open to alternatives as well. College administrators should connect with the academic advising team when brainstorming retention strategies. Academic advising is still at the front line of communication and support.

References

- Aiken-Wisniewski, S. A., Smith, J. S., & Troxel, W. G. (2010). Expanding Research in Academic Advising: Methodological Strategies to Engage Advisors in Research. *NACADA Journal*, 30(1), 4-13.
- Anantatmula, V. (2010). Project Planning Techniques for Academic Advising and Learning. *MountainRise*, 6(1), 1-18.
- An Interview with Harvey W. Wall: Personal Perspectives on the History of Academic Advising. (2009). *NACADA Journal*, 29(1), 52-61.
- Bahr, P. (2008). "Cooling out" in the Community College: What Is the Effect of Academic Advising on Students' Chances of Success?. *Research in Higher Education*, 49(8), 704-732.
- Beatty, J. D. (2009). The National Academic Advising Association: A Brief Narrative History. *NACADA Journal*, 29(1), 68-77
- Champlin-Scharff, S. (2010). Advising with Understanding: Considering Hermeneutic Theory in Academic Advising. *NACADA Journal*, 30(1), 59-65.
- Cook, S. (2009). Important Events in the Development of Academic Advising in the United States. *NACADA Journal*, 29(2), 18-40.
- Derby, D. C., & Smith, T. (2004). An Orientation Course and Community College Retention. *Community College Journal of Research & Practice*, 28(9), 763-773.
- Gladstone, R., & Garcia, W. (2007). Dental hygiene: reflecting on our past, preparing for our future. *Access*, 21(9), 12-20. .
- Gordon, V. N. (2004). The Evolution of Academic Advising: One Institution's Historical Path. *ACADA Journal*, 24(1/2), 17-23.

- Grater-Nakamura, C., Aquilina-Arnold, J., Keates, K., & Lane, L. (2010). Does mentoring play a role in the transition from student to dental hygienist?. *Canadian Journal of Dental Hygiene*, 44(6), 247-255.
- Hagen, P. L. (2008). Imagination and Interpretation: Academic Advising and the Humanities. *NACADA Journal*, 28(2), 14-20.
- Harrison, E. (2009). What Constitutes Good Academic Advising? Nursing Students' Perceptions of Academic Advising. *Journal of Nursing Education*, 48(7), 361-366.
- Makela, J., & Illinois Univ., C. p. (2006). Advising Community College Students: Exploring Traditional and Emerging Theory. In Brief. *Office of Community College Research and Leadership*,
- Miller, M. T., & Pope, M. L. (2003). Integrating Technology into New Student Orientation Programs at Community Colleges. *Community College Journal of Research and Practice*, 27(1), 15-23.
- Monson, A., & Cooper, B. (2009). Career influences and perceptions of pre-dental hygiene students. *Journal of Dental Hygiene*, 83(3), 126-133.
- Monson, A., & Engeswick, L. (2007). ADHA's focus on advancing the profession: Minnesota's dental hygiene educators' response. *Journal of Dental Hygiene*, 81(2).
- Museum, S. D., & Ravello, J. N. (2010). Characteristics of Academic Advising That Contribute to Racial and Ethnic Minority Student Success at Predominantly White Institutions. *NACADA Journal*, 30(1), 47-58.
- Onik, E. (2009). Missing persons: African Americans in dental hygiene. *Journal of Dental Hygiene*, 83(2), 62-69
- Poirier, T. I., Santanello, C. R., & Gupchup, G. V. (2007). A Student Orientation Program to

- Build a Community of Learners. *American Journal of Pharmaceutical Education*, 71(1), 1-11.
- Santoso, P. (2010). The Development of a Case Based Reasoning System in Relational Model Using Group Technology for Academic Advising. *International Journal of Academic Research*, 2(6), 287-294.
- Saunderson, S. (2010). The evolution of Dental Hygiene: Looking back 40 years. *Canadian Journal of Dental Hygiene*, 44(6), 243-244.
- Shaffer, L. S., Zalewski, J. M., & Leveille, J. (2010). The Professionalization of Academic Advising: Where Are We in 2010?. *NACADA Journal*, 30(1), 66-77.
- Schwebel, D. C., Walburn, N. C., Jacobsen, S. H., Jerrolds, K. L., & Klyce, K. (2008). Efficacy of Intrusively Advising First-Year Students via Frequent Reminders for Advising Appointments. *NACADA Journal*, 28(2), 28-32.
- Trombley, T., & Holmes, D. (2009). Defining the Role of Academic Advising in the Industrial Setting: The Next Phase. *NACADA Journal*, 29(1), 47-51.
- Wiggins, G., & McTighe, J. (2006). Examining the Teaching Life. *Educational Leadership*, 63(6), 26.