

WHY MINORITIES AVOID ALLIED HEALTH PROFESSIONS

by

Shirley N. Smith

Presented to the Public Administration Faculty
at the University of Michigan-Flint
in partial fulfillment of the requirements for the
Master of Public Administration Degree

Date

April, 1993

First Reader: Patricia House

Second Reader: Ellis Perlman

Acknowledgements

I would like to acknowledge Steve Nikoloff, Director of Research, Flint Board of Education; Mrs. Bessie H. Straham, Principal, Northwestern High School; Mr. Glenn Kelly, Economics Instructor, Northwestern High School; Mr. Doug Weir, Principal, Genesee Area Skill Center; Ms. Phyllis Jones, Facilitator, Genesee Area Skill Center; Mrs. Marilyn Reeder, Instructor, Genesee Area Skill Center, Mrs. Carlotta Simons-May, Instructor, Genesee Area Skill Center. This project would not have been completed without their express permission and cooperation.

To the students at Northwestern High School and Genesee Area Skill Center who took time from a busy and hectic class schedule to complete the questionnaires, I express my deepest appreciation. Without them there would be no data.

Last but not least I would like to thank Ms. Deb Millings for her clerical assistance. This study would have not been completed without her assistance.

TABLE OF CONTENTS

Acknowledgements	i
Table of Contents	ii
Abstract	1
Overview of the Problem	3
Introduction	4
Hypotheses	8
Definition: Minority	9
Definition: Allied Health Professions	10
Methodology	12
Limitations	14
Survey Respondents	19
Discussion of Findings	21
Conclusions	34
Summation	39
Recommendations	41
References	43
Appendices	45
Survey Instrument	51

ABSTRACT

The participants in this study supply some of the reasons minority individuals do not apply, enter, or graduate from an "Allied Health Profession." Persons who were chosen for this project represent minority individuals at the high school level who may or may not have considered entering a healthcare vocation.

The individuals were enrolled at Northwestern Community High School where a traditional curriculum of math, science and english is offered as the main courses of study in preparation for attendance at a four year institution. The Genesee Area Skill Center is a "vocational/technical" institution with the specific goal of producing an individual prepared to enter the work force upon graduation. Students at this institution were enrolled in a curriculum geared to a healthcare profession, i.e., nursing or medical assistant.

This was a one time only study with participants providing answers to a survey prepared by the evaluator to ascertain their interest in a healthcare profession and the reasons they choose the specific educational institution they

The Director of Research for the Flint Board of Education and the principals of the two schools, Northwestern Community High School and the Genesee Area Skill Center, agreed to allow the students to participate in this survey.

An extensive review of the literature does not yield any evidence of the cause of the lack of people of color in the aforementioned arena. It was this specific lack of evidence which drove the desire to find the similarities, differences between the institutions and the two sets of individuals which would demonstrate the reasons minorities do/do not want to become members of specific Allied Health Professions. Therefore, it was the author's belief that once these reasons were uncovered, based on these deductions, measures could be taken to encourage minority individuals to seek entry into healthcare sciences/professions.

OVERVIEW OF THE PROBLEM

By the year 2000, some of the fastest growing professions--Radiologic Technologists, Respiratory Therapists--will need to increase their ranks by 41-66%. Because the "proportions of blacks and Asians will increase while whites will decrease,"¹ it is imperative that something be done to increase the presence of minority individuals in the Allied Health Professions. Hence the study to disclose the reasons for the lack of minority representation.

¹U.S. Labor Department. Occupational Outlook Quarterly, Fall, 1987, 31(3), 4-14

INTRODUCTION

By the year 2000, some of the fastest growing occupations (professions)--Radiologic Technologists (Radiographers), Respiratory Therapists, Occupational Therapists--will need to increase their ranks by 41-66%. These positions will more than likely be filled by an individual from the "minority" population; more specifically, Hispanic, Black or Asian.² According to demographics, "the hispanic labor force will rise from 8 million in 1986 to 14 million in 2000. The proportions of blacks and Asians will increase while whites will decrease."³

At present there is a dearth of these individuals in the Allied Health Professions which either increases or decreases depending on which profession you choose to examine. Although there have been repeated requests and expressions of concern over the lack of minority individuals in these health care professions, there is still a marked absence of people of color in the enrollment, participation, and graduation from these arenas.

A thorough search of the literature reveals that nursing has begun to rise to the challenge of increasing minority representation. The University of

²U. S. Labor Department, Occupational Outlook Quarterly, Fall, 1987, 33(3), 5-11; 29-37.

³U.S. Labor Department, Occupational Outlook Quarterly, Fall, 1987, 31(3), 4-14

Southwestern Louisiana used a grant to increase minority participants in a BSN program.⁴

Anderson states that

recruitment of minorities into nursing should include a "multicultural perspective" which views the minority student as a "cultural asset."⁵

In an article about "Understanding the Patient: The Need for Minorities in Clinical Laboratory Science," "anecdotal" evidence cites counseling against difficult academic courses as a reason for lack of recruitment for minorities.⁶ Others cite "lack of role models."⁷

From the wide variety of articles read, the validity of these actions/statements are not questioned by the author. However, they lack one common denominator: input from the minority community. They also fail to address the primary concern: why minorities avoid allied health professions. To the author, this lack of evidential support should be corrected and

⁴Des Ormeaux,S, Redding, E.A. GAIN: Successful Recruitment and Retention Program for Disadvantaged Students. Journal of Nursing Education, Nov. 1990, 29(9), 412-414.

⁵Anderson, J. Nursing Students: Minority Recruitment and Retention. Nurse Educator, September/October 1991, 16(5), 38-39

⁶Gore, M.J. Understanding the Patient: The Need for Minorities in Clinical Laboratory Science. Clinical Laboratory Science, May/June 1990, 3(3), 142-148.

⁷Martin, B.G., Woods, K.A., Holiday, I. Minority Recruitment: An untapped resource for the MT Shortage.

substantiated by going directly to the individuals that have been discussed--the minority population.

To obtain the viewpoint of said population, the following groups were sampled:

1. Students at Northwestern Community High School, a "traditional"⁸ high school formerly identified as a "magnet"⁹ school for individuals who were interested in pursuing a career in the healthcare arena.

The magnet program was dropped in 1990, but there were residual students enrolled at the high school who were pursuing health careers.

2. Students from the Genesee Area Skill Center, a "vocational/technical" training school, dedicated to teaching employable skills to be used prior to and immediately upon graduation.

These groups of students represented minorities who would or could continue their education in colleges and universities after graduation from high school. They also represented minorities who would, could, or might seek employment immediately upon graduation from high school, based on skills attained during high school.

⁸Traditional in the sense that curriculum is geared towards a College Prep or academically difficult curricula such as math or science.

⁹A school whose curriculum is geared to specific subjects to draw students who are interested in a particular field of study such as the sciences, arts, theater, etc.

To ascertain what must be done to alleviate the problem of lack of minorities in the Allied Health Professions, the purpose of this study was to identify the variables that exist in and between a "traditional" educational institution and a "vocational/technical" educational institution that influence a minority individual's decision to enter an Allied Health Profession, or the reasons for the students' lack of choice of an Allied Health Profession.

Some of the issues that were explored to determine these variables were as follows:

1. Do minorities understand the term, ALLIED HEALTH PROFESSIONS?
2. Are there specific, identifiable variables endemic to the minority populations in the aforementioned educational systems which persuade minorities to enter or not enter the ALLIED HEALTH PROFESSIONS?
3. Once the variables have been identified, are there obstacles to the minority population which prevent them from pursuing ALLIED HEALTH PROFESSIONS?
4. If the barriers are removed, will the minority populations increase their enrollment in the ALLIED HEALTH PROFESSIONS?
5. Are there specific, major categories in the ALLIED HEALTH PROFESSIONS that appeal to minority populations more than other professions?

It was these kinds of questions that led to the following hypotheses.

HYPOTHESES

Because the reasons were unknown at the onset of this study, the hypotheses are as follows:

- H :
- 1 Considering the variables to be addressed in this study, there are major differences between traditional and vocational educational institutions which influence a minority's career decision.
- H :
- 2 Some of the reasons that are uncovered during this exploration will result in a higher number of minorities enrolling in Allied Health Professions rather than other professions.

Having arrived at these reasons, they could be shared with the Allied Health community and measures implemented which could/would be used to increase the number of minorities enrolling in these areas.

However, prior to any attempt to prove/disprove these suppositions it will be necessary to define two terms. To that end the following definitions will be presented at the beginning of this paper:

1. What is a minority?
2. What are "ALLIED HEALTH PROFESSIONS?"

DEFINITION: MINORITY

The United States Census Bureau only recognizes five (5) categories of races. They are White, Black, Asian or Pacific Islander, American Indian, and Other. Hispanic refers to one's ability to speak Spanish and other cultural items and is not a racial category.

Because there is only one group identified by the Census Bureau and only one or two groups present in significant numbers in the Flint and Genesee County School districts, the term MINORITY refers to individuals of Afro-American and Mexican American descent-- Afro-American (Black) because they represent the largest minority group (29,986,060),¹⁰ and Mexican-American because they are a rapidly growing population with almost nonexistent representation in healthcare or the ALLIED HEALTH PROFESSIONS.

¹⁰U.S. Census Bureau, 1990 Census

DEFINITION:

ALLIED HEALTH PROFESSIONS

The term ALLIED HEALTH PROFESSIONS includes 26 health-related groups that assist, facilitate, and complement the work of physicians and other healthcare specialists.¹¹ Listed by profession they are:

- Radiographer (Radiologic Technologist)
- Medical Technologist
- Respiratory Therapist
- Medical Laboratory Technician-Associate Degree
- Medical Assistant
- Respiratory Therapy Technician
- Surgical Technologist
- Medical Record Technician
- Nuclear Medicine Technologist
- Radiation Therapist
- Emergency Medical Technician-Paramedic
- Occupational Therapist
- Medical Record Administrator
- Physician Assistant
- Cytotechnologist
- Diagnostic Medical Sonographer
- Medical Laboratory Technician-Certificate
- Histologic Technician/Technologist
- Specialist in Blood Bank Technology
- Medical Illustrator
- Surgeon Assistant
- Cardiovascular Technologist

The major divisions recognized by the Committee on Allied Health Education and Accreditation (CAHEA) are:

- Radiological Sciences
- Laboratory Sciences
- Respiratory Care

¹¹CAHEA accredited allied health education programs, facts and figures, 1991

These professions are accredited by CAHEA--part of the American Medical Association (AMA). The Committee on Allied Health Education and Accreditation is recognized by the U. S. Secretary of Education and the Council in Postsecondary Accreditation as a reliable authority of acceptable educational quality for these professions.¹²

These are professions that require education beyond high school and are experiencing a shortage of minorities. Participants in this survey, it was hoped, would provide reasons for the lack of interest in the aforementioned occupations. If we can ascertain which particular areas do and do not hold an interest for the minority student, perhaps the solution to increasing minority enrollment in these areas will become more apparent.

¹²Gupta, G. C. Student Attrition A Challenge for Allied Health Education Programs. Journal of American Medical Education, 1991, 266(7), 963-967.

METHODOLOGY

This research involved a written questionnaire. The instrument was developed using factors described in the literature as "influential" in the recruitment of minority students for a variety of health related fields. A Likert-type scale was prepared and based on these factors.

The questionnaire was reviewed by professionals (pharmacist, nurse, drug counselor, instructors) for content and clarity. It was then pre-tested on 16 high school students outside the Genesee County area to obtain comments on relevance, clarity and ease of completion. Revisions were incorporated and submitted to the Human Subjects Committee at the University of Michigan--Flint for review of content and approval for use in determining factors related to deficient minority enrollment in Allied Health Careers. An adjustment was suggested and included in the final survey instrument prior to its implementation with participants.

The questionnaire was then presented to separate classes of students at Northwestern Community High and the Genesee Area Skill Center. Students were informed orally and in writing of the author's intent to delve into the reasons for the shortage of minorities in the Allied Health Professions and the intent to conduct the aforementioned written survey. A faculty member was present at all times.

Fifty-three surveys were handed out to the students at Northwestern. When compiling the results of the survey, it was discovered that nine of the surveys were incomplete. Some questions were answered; others were left blank. In some instances, only one question on each page was answered. One can only attribute these actions to the vagaries of youth as no other explanation was communicated to the author. To avoid skewing the results of this study, these survey replies were not included in the tabulated results.

Forty-four out of 53 surveys were counted for Northwestern, a response rate of 88% (44/50). At the Genesee Area Skill Center 29 out of 50 students, from three separate nursing and medical assistant classes, complied with the request to complete the surveys. This resulted in a response rate of 58% (29/50).

LIMITATIONS

The contents of the study were limited to the major divisions recognized by CAHEA and the following representative professions:

Radiographer (Radiologic Technologist)
Medical Technologist
Physical Therapist
Radiation Therapist
Nurse
Physician

These professions:

Radiographer (Radiologic Technologist)
Medical Technologist
Physical Therapist

were chosen because of the author's perceived visibility and understanding of these occupations to the general public and therefore to the student population of Flint.

Radiation Therapist was chosen because this particular modality is a subset of Radiologic Sciences and a wish on the part of the evaluator to discover the extent to which it would be recognized as such by the minority population.

Nurse and Physician were chosen because the author was interested in the number of individuals who would choose the profession(s) around which the Allied Health Professions are centered, require commitment of four or more years of postsecondary education, extensive financial resources to attain professional status, and were instantly recognized as requiring these

commitments to complete the educational process by prospective participants in this survey.

The educational requirements for the Allied Health Professions range from an Associate's to a Master's degree.

In terms of the survey itself, the author had hoped to include three separate groups of minorities including those who have graduated and are presently employed in an Allied Health Profession. Administrators at Hurley Medical Center, Northwestern Community High School and the Genesee Area Skill Center were approached in order to obtain permission to speak with their employees/students regarding the proposed project.

Due to the rapid and continuous changes occurring in healthcare institutions, i.e., decrease in funding, downsizing of staff, non-replacement of retirees, the resulting decrease in morale due to all of these events, it was necessary to abandon the group at Hurley Medical Center.

After obtaining permission from Mr. Steve Nickoloff, Director of Research, Flint Board of Education, Mrs. Bessie Straham, Principal, Northwestern High School, and Mr. Doug Weir, Principal, Genesee Area Skill Center, permission was granted to conduct surveys at the aforementioned schools.

Mrs. Straham requested that the survey be conducted in the Economics class because:

1. There was a larger cross-section of students interested in health careers and other disciplines.
2. It was a required class for graduation.

Mr. Weir asked that I work through Ms. Phyllis Jones, Facilitator, at the Skill Center. Appointments were made with Mrs. Marilyn Reeder and Mrs. Carlotta Simons-May, Instructors in healthcare subjects (Medical Assistant and Nursing). After lengthy discussion about the professions chosen as the focus of this study, all parties embraced the project .

Therefore, the questionnaire surveys upon which this thesis is based is limited to the following individuals:

1. Students at Northwestern High School who were in attendance in Economics Class (a required course) and who may or may not have/had an interest in becoming an Allied Health Professional.

Northwestern High School is a "traditional" school with mandatory courses in Mathematics, English, Science, Social Science, Physical Education, Fine Arts and Foreign Language or Occupational Education.¹

2. Students at the Genesee Area Skill Center who were currently enrolled in Allied Health Profession courses and may or may not be employable at the end of their educational activities in the field of their endeavor. They have at least been exposed to a hospital or clinical setting.

GASC students are pursuing "traditional" courses at area high schools, but attend the Skill Center two and one half hours per day for vocational-technical courses during their high school years that may result in immediate employment upon graduation.¹

At the time of this research there were 1,676 students enrolled at Genesee Area Skill Center, 468 of whom were minority individuals, and 112 minorities are enrolled in the healthcare section of the curriculum.¹⁵ Of these, 29 students who attended nursing and medical assistant classes taught by Mrs. Reeder and Mrs. Simons-May, and are representative of the minorities who select healthcare courses at the Genesee Area Skill Centers, agreed to participate in the survey.

¹Flint Public Schools guide for the High School Program of Instruction, Flint Public Schools, May, 1985

¹⁵Interview with Phyllis Jones, Facilitator, Vocational Education, Genesee Area Skill Center, Flint, Michigan, 24 April 1993.

At Northwestern High School there were 1,372 minority students (98%)³ Of this number 44 individuals participated in the survey. Because Economics is a required course for all students at the high school, these participants represent the wide range of occupational interests of minority students in the institution (Table 1)

³Interview with Bessie H. Straham, Principal, Northwestern Community High School, Flint, Michigan, 24 April 1993.

Table 1

SURVEY RESPONDENTS

	GROUP I (GASC) N = 29	GROUP II (NW) N = 44
YEAR OF BIRTH:		
1973	1	1
1974	3	4
1975	19	26
1976	6	13
TOTALS	29	44
SEX:		
Male	1	24
Female	28	20
TOTALS	29	44
RACE:		
Mexican-American	2	0
Afro-American	25	43
Asian	0	1
American-Indian	1	0
TOTALS	29	44

YEAR OF BIRTH

Chi-Square = .7606161 DF = 3 P = 0.8589

SEX:

Chi-Square = 18.06122 DF = 1 P = 0.0000

RACE:

Chi-Square = 6.278936 DF = 5 P = 0.2800

Using the Chi-Square analysis, with a significant factor of $P = < .5$, it was evident that for this survey the minority population was composed

mainly of Afro-Americans. The gender of the participant was also significant between the two groups: a mix of males and females at Northwestern Community High School with one male participant at GASC. Because there was only one male participant at the Genesee Area Skill Center, the author has to state that ALL the results from GASC represent female responses.

DISCUSSION OF FINDINGS

There were 29 minority students who participated in this study at the Genesee Area Skill Center (GASC), and 44 at Northwestern Community High School. For the purposes of brevity, Genesee Area Skill Center will be referred to as GASC, Group I, and Northwestern Community High School will be NW, Group II.

Because this was a search for the variables and related components, it is essential that the questions and replies with significant values be included in the thesis and presented to the reader. We now begin that process.

In any study it is essential for a participant to understand what is being asked of him. When I refer to Allied Health Professions, I cannot assume that the individual knows what I am referring to. In order to determine whether or not minorities understood what was meant by the term "Allied Health Professionals," the first question on the survey addressed that issue. Hence in TABLE 2, you have a total of 73 individuals who replied to the query.

QUESTION: The definition of Allied Health Professions is: 26 health-related groups that assist, facilitate and complement the work of physicians and other health care specialists.

TABLE 2

REPLY	GROUP I (GASC) N = 29	GROUP II (NW) N = 44
Yes	7	7
No	1	2
Maybe	4	16
I do not know	13	15
No answer	4	4

Chi-Square = 4.796517 DF = 4
P = 0.3088

In dissecting this table, "maybe" indicated an uncertainty on the part of the participant to commit himself to an answer. It lead the author to believe that s/he did not know the answer. A "No answer" indicated the same. Therefore, when sheyou collapsed the categories, "no", "maybe", "I do not know", and "no answer" across BOTH groups for this question, there were 59 individuals (22 in Group I, 37 in Group II), or 81% of your population who had little if any concept of the term Allied Health Professional.

One would also have to say there was a higher degree of uncertainty regarding the definition in the "traditional" institution.

To ensure that lack of knowledge of the definition of Allied Health Professions did not equal a lack of interest in healthcare careers, the extent of interest in the healthcare field was addressed by this question:

Pick one of the occupations listed below as your choice for the future.

TABLE 3

REPLY (Occupation)	GROUP I (GASC) N = 29	GROUP II (NW) N = 44
Physical Therapist	4	7
Radiation Therapist	0	1
Medical Technologist	4	1
Nurse	13	7
Radiologic Technologist	4	1
Physician	1	9
TOTALS Other (Please state the occupation/profes sion of choice	3	23
<u>SPECIFICITY OF OTHER</u>		
Robotics Hydraulics Engineer	0	1
Lawyer	0	2
Business Management	0	1
Computer Engineer	0	2
Accounting	0	4
Engineer	0	2
Mechanic	0	1
Cosmetologist	0	1
Elementary Education	0	1
Physical Education	0	1
Medical Assistant	2	0
Veterinarian	1	0
No Answer	0	1

Chi-Square = 21.70106 DF = 6
P = 0.0014

The significant factor of $P = 0.0014$ makes it quite obvious that these students have indeed considered a career in allied health professions at one time or another, and the collapsed results from both institutions indicate that Nurse (27%), physical Therapist (15%), Medical Technologist (7%), Radiologic Technologist (7%) are the careers of choice for future employment.

Nevertheless, with the exception of Physical Therapist, the students at GASC showed a higher degree of interest in these fields than the Northwestern High School students.

The results of this survey also demonstrated the fact that the students at Northwestern were interested in careers which require several years of postsecondary education.

If you keep in mind that Northwestern follows the "traditional" curriculum and the Genesee Area Skill Center emphasizes vocational training, the results were not surprising. Immediate results from an education is the goal of "vocational/technical" education; future results are the goals of "traditional" education. Also, Allied Health Professionals have historically been female. Although the gender bias at GASC was not examined, this bias could have been suggestive of past occupational trends.

When asked to pick all the reasons they "chose this occupation," the significant factor, $P = .47$ (Table 4A, Appendices, Page 48), was less striking, but the results were significant. An examination of the specific replies demonstrates that the choices were almost equal, with the widest range of disagreement between the two groups being in the "I know what I want to do," "other", and "I know what this professional does" categories. These responses indicated the participant had made some definite career choices, the career choice appealed to him, the occupation attracted his interest, and there were "other" factors which enter into a career choice for minorities.

To examine one of the "other" factors--who influences the minority individual's career choice(s)--the students were asked this specific question (Table 7, Appendices, Page 50).

Although the calculated significant factor of .4676 was only .03 larger than the significant factor of $P = < .5$, it was apparent from the numbers that there was a high probability of influence on career choice for each group from the individuals listed.

If you examine the replies, Group II was more adamant in their rejection of "influence". This could be connected to the fact that these students had already chosen "other occupations" and they "know what I want to do.," (82%)

One should note the disparity between institutions in the role model/mentor influence. It appears that role models may play a larger role in the "traditional" setting than they do in the "vocational" setting. A separate study would be necessary to determine the exact reason for this incongruity, but it should be noted.

The evaluator continued to explore influential individuals with the following query:

QUESTION: If I had a pleasant experience with someone in the health care field, I would consider entering that profession.

TABLE 4

REPLY	<u>GROUP I</u> (GASC) N = 29	<u>GROUP II</u> (NW) N = 44
Yes	15	12
No	2	12
Maybe	10	18
Other (TOTAL)	2	2

Chi-Square = 6.94175 DF = 3
P = 0.0727

With P = 0.07, it can be accurately stated that a person who is already in a healthcare profession can influence a minority individual with a pleasant interaction but there was disparity between the two groups, and we must approach this conclusion cautiously.

52% said yes at GASC. 27% said yes at Northwestern. Group II's "No" response was significantly stronger than Group I's. (27% versus 6%) However, the undecided votes were equally strong; 34% "maybe" at GASC, and 41% at Northwestern.

Perhaps the most positive way to interpret this information is to suggest that the individual participants had not formed any concrete opinions but were open to positive pressure from individuals within the healthcare field if they were exposed to a "pleasant experience".

This leads us to a final attempt to settle the question of role model/influence exerted by a health care professional. The following question was posed:

QUESTION: If I knew someone that was in a particular healthcare field and felt I could turn to them for guidance when I needed it, I would choose a healthcare profession.

TABLE 5

REPLY	<u>GROUP I</u> (GASC) N = 29	<u>GROUP II</u> (NW) N = 44
Yes	14	11
No	2	9
Maybe	8	19
I do not know	4	5
Other (Please specify) (TOTALS)	1	0

Chi-Square = 9.0979767 DF = 5
P = 0.1052

It became clear that a professional already in the field could influence a minority individual's choice of career, but that the "traditional" student was more resistant to this influence than the "vocational/technical" individual.

It occurred to the author that guidance counselors at these institutions would/could play an enormous role in influencing the students' future course of study. Officially, students at GASC received counseling from their home school. They saw a counselor at Genesee Area Skill Center if they need to have a class changed or felt the need to talk to someone.¹⁷

At Northwestern, there is no "set requirement but it is standard procedure to have a counselor see the student when they sign up for classes."¹⁸

However, the results obtained from the survey are ambiguous at best (Table 4A, Appendices, Page 49). According to the students, school counselors were seen by the students on the average of every three months. One can also state that they are seen at the beginning of each term/semester. However, from the students' point of view, it was clear that no real difference existed between the institutions as to the number of times a student saw/interacted with their counselor.

¹⁷Interview with Phyllis Jones, Facilitator, Vocational Education, Genesee Area Skill Center, Flint, Michigan, 24 April 1993.

¹⁸Interview with Mr. Stableford, Assistant Principal, Northwestern High School, 24 April 1993.

It was also clear that there was no set pattern within the institutions and there was wide variation in the number of interactions between counselors and students in both groups.

The role the counselor played is left unanswered as there was one reply and three replies respectively from Group I and II as having any influence over the student's choice of career. One needs to investigate this further to make any concrete determinations. But based on this study, we might conclude that the counselors do not play an active role in determining the students' goal for their educational life.

This leads us to the actual knowledge base of the participants regarding the duties of the occupation that they chose. Table 6 indicates the significance of that base.

QUESTION: I know for sure what each professional listed in question number two does for a living.

REPLY	GROUP I (GASC) N = 29	GROUP II (NW) N = 44
Yes	15	15
No	4	15
Maybe	6	10
I do not know	3	1
Other (please specify)		
TOTALS	1	3

Chi-Square = 6.563345 DF = 4

P = 0.1608

With a P factor of 0.16, there was a very strong difference in the knowledge base of the duties involved in an occupation and the chosen profession.

Percentage wise, the "yes" scores were unevenly split; GASC 52%, Northwestern 34%, or 41% for both groups combined. The major differences appear in the "no" and "maybe" categories. The numbers taken individually for each group, indicate that the students at the Skill Center were more knowledgeable about the healthcare occupations. The no scores from Northwestern (68%) tended to confirm this theory.

This indicates to the evaluator that the "vocational" student was familiar with more aspects of the aforementioned professions. S/he had made a more informed choice in his reply to the survey. The "traditional" student was less aware of the requirements of the occupations listed in the survey.

It also indicated that the student who knew what a professional does was more likely to follow a prerequisite course of study, i.e., those at the Skill Center have focused on specific healthcare occupations. To explore the option of following a specific career path, the author posed this question:

QUESTION: I chose this school because (Select ALL answers that are appropriate for you).

TABLE 7

REPLY	GROUP I (GASC) N = 29	GROUP II (NW) N = 44
It was close to home	6	32
My parents said I had to	1	10
I could take the classes I wanted	11	11
I will be employable upon graduation	6	1
It offered the best alternative to college	7	1
It offered job training in the career of my choice	14	7
My counselor suggested it	4	1
My friends told me	0	5
I was informed in a session organized for that purpose	3	2
I wanted to attend this school	8	29
Other (Please specify) (TOTALS)	5	1

Chi-Square = 55.55215 DF = 12
P = 0.000

From the numbers it appears that Group I, GASC, chose the school mainly for the opportunities associated with job training and employment: "I could take the classes I wanted, "I will be employed upon graduation," "It offered the best alternative to college," and "job training in the career of my choice".

Group II, Northwestern High School, chose the school because "it was close to home", "they wanted to attend", and their "parents said they had to". Again, "traditional" versus "vocational"; immediate versus future goals.

With a $P=0.000$, the results of this question suggest major differences in the reasons for choosing an institution and/or a career choice. Hence a "traditional" student would need an entirely different approach than the "vocational/technical" student in order to persuade them to enter a specific field.

However, when questioned about their knowledge of courses needed to be completed for entry into a healthcare profession, this difference disappeared. (Table 5, Appendices, Page 49).

At the Skill Center it was obvious that the students felt they knew what they had to do to be eligible for their chosen careers: 72% replied yes. At Northwestern 54% replied yes, for a combined rate of 62%. This indicated that students at both facilities had a good grasp of the basic requirements of a given course of study.

Taken separately, however, the Skill Center Group had a higher awareness level. This again, could have occurred because of the concentration of thought to a particular field of endeavor and/or the uncertainty level of Group II about what these occupation do for a living. It does indicate, however, that

the student(s) in both groups ARE aware, to a large degree, of needed requirements for a specific occupation.

The final question addressed the ability to complete a program with/without financial assistance (Table 5A, Appendices, Page 52). Forty percent of the students emphatically stated that they could not complete the educational requirements of a program without financial assistance. If you collapse the "maybe" and "I do not know" categories into "No", 79% of the students state they cannot complete the requirements of higher education due to lack of funds.

Based on the demographics of the two groups, the evaluator would state that the largest number of individuals affected by this lack of monies in Group I, would be females. In Group II, the financial difficulties would be split evenly as there are essentially an equal number of males and females.

CONCLUSIONS

This thesis began as an exploration to find the similarities/differences between "traditional" and "vocational/technical" high school participants. It was also a search for an explanation to the question of why minorities avoid Allied Health Professions. A microcosm of information was obtained, during this quest for information, but some questions remain unanswered.

The author does not know why the Mexican-American population appears not to show any interest in the Allied Health Professions. The number of participants from this minority population were too few in this project, hence, no conclusions can be reached or stated about Mexican-Americans and the reasons they may or may not avoid Allied Health Professions.

Removal of racial and/or sexual barriers and the impact this removal would have on minority enrollment was not addressed. The minority viewpoint on being a "cultural asset" was not explored, and all of the reasons found, i.e., the role of the counselor, were not verified by calculated significant factors.

However, it is apparent that students who attend the "traditional" high school do aspire to enter professions that require several years of postsecondary education. The vocational/technical student is reaching for

more immediate results such as employment upon graduation. Vocational students perceive the GASC as offering job training in the career of choice and the best alternative to college. The "traditional" student is the least likely to be influenced by an individual already in an Allied Health Profession, but is more receptive to a role model/mentor. The specific career choices that were given by the Northwestern participants indicate that they have decided that they want to be the professional, i.e., physician, lawyer, computer engineer.

Between the two groups, the students at Northwestern Community High School are the least likely to consider a career in healthcare. The students at the Skill Center exhibit a higher degree of interest in careers in the Allied Health Professions. Whether or not this means that there is a preference on the part of the "traditional" student for more freedom, respect, etc., would require another study. But those choices should be noted.

The participants at the Genesee Area Skill Center clearly indicate employment as a goal of the vocational/technical curriculum. Again, the reasons for this--academic ability, areas of interest and/or the need for monetary gain--need to be explored in future studies. These are all areas the author had hoped to gain insight into but failed to do so in this project.

However, what can be stated is as follows: The term Allied Health Professions has no relevant meaning to the minority individual in either the "traditional" or "vocational" educational environment. Even though the choice

of professions was limited to six, including nurse and physician, only nine students out of a total of 73, definitely associated any of those six occupations with the Allied Health Professions. You cannot persuade any individual to enter a profession which lacks definition.

After careful consideration of the variables manifest in this study, I would accept hypotheses one.

H :

- 1 Considering the variables to be addressed in this study, there are major differences between traditional and vocational educational institutions which influence a minority's career decision.

The reasons are as follows: One, of the limited number of choices that were given to the students, Nurse was first choice of those in attendance at the Skill Center, while Physician or some other occupation requiring a lengthy educational process were the choice of those at Northwestern High.

Two, the choice of career is influenced by the student, a role model/mentor, and parents in a "traditional" setting. In the "vocational" environment the student is influenced by themselves and their parents, with parents being a weak second alternative.

The career choices made by those students at the Skill Center, with the exception of Nurse, tended to aim at "vocational" training rather than "traditional" education. The career choices made by those students at Northwestern were the opposite.

The student who is geared to "vocational" educational activities has a higher awareness level of the requirements for a particular field of healthcare the "traditional" student.

Three, when you tabulate these reasons, it is clear to the author that students who "chose" to attend "vocational" institutions have different goals and objectives than the student who attends a "traditional" school. Hence, you would need to use different approaches for different categories of job classifications to induce the student to enroll in an Allied Health Profession.

Results for hypothesis two are less compact and I would have to reject the hypothesis until increased enrollment of minorities in Allied Health Professions were a proven fact. The reasons for a possible increase in minority enrollment in Allied Health Professions, however, are worth citing.

*The student will enter a field of endeavor if they know what is expected of them and if it is something they want to do.

*They are willing to consider entry into a healthcare profession if they have someone they feel they could turn to for guidance when deemed necessary.

*Overall, ALL students are aware of course requirements for entry into

a profession of their choice.

*The minority student in either group cannot complete his or her education without financial assistance.

Other factors which may not be directly related to hypothesis two but do have a bearing on conclusions one could draw from this study are:

*If you want to influence the educational pursuit of minorities and/or have them become Allied Health Professionals, you must begin the process before they reach high school.

*Counselors, friends or other individuals do not contribute significantly to the decision making process of which career path to follow.

*There was an unexamined gender bias in the populace of the Genesee Area Skill Center which could skew the results of this survey.

SUMMATION

This study barely scratched the surface in obtaining answers to the lack of minority individuals who apply to, enter and graduate from the Allied Health Professions. No obvious reasons for the "traditional" high school participants preference for career choices that require graduate and post graduate level course of study were obtained.

Societal pressures were briefly introduced in the form of "friends" and "advertisements". The difference in the perceptions of the males and females at Northwestern Community High School in relationship to the career choices that they stated they preferred, were not explored. Neither were the differences in perception of the females at the Genesee Area Skill Center.

No attempt was made to determine whether or not there was an alternative choice of career for either group.

Students state that they understand the prerequisites for specific Allied Health Professions, but further verification of that knowledge is needed.

The role of institutional or political policies and the influence this has on the individual's choice of career(s) were not delved into, nor was cultural or familial background. But even with these short comings, the author has been able to determine that some of the major reasons minorities do not pursue the

Allied Health Professions is because they do not know what they are, they have already made a career choice by the time they reach high school, and they are financially unable to pay for their education.

In view of these findings, the following recommendations are being made.

RECOMMENDATIONS

When approaching minorities for inclusion into the Allied Health Professions, develop literature/brochures that incorporate the term Allied Health Professionals on a routine basis. Use the phrase on a consistent basis when referring to disciplines connected to Allied Health Professions when talking with minority individuals.

Be a role model/mentor. The amount of influence you can contribute as a healthcare professional is dubious, but the students in this study have not rejected the idea entirely.

Early dissemination of information and identification of occupational pursuits is essential to the increment of minorities in Allied Health Professions.

The minority student in a "traditional" setting is prepped for higher education. Enlighten him so that s/he can make an informed choice, support his efforts with a role model/mentor, and s/he will diligently pursue that career choice.

Increase the availability of funds for educational assistance.

There is no rapid cure for the lack of people of color in Allied Health

Professions. But if these suggestions are implemented and pursued to the fullest extent possible, the problem will diminish.

SELECTED READINGS

- Brown-West, A. P. Influencers of career choice among allied health students. Journal of Allied Health, 1985, 14(1), 63-70.
- Ford Foundation Staff Paper, August, 1981 Minorities and Mathematics
- Hirsch, C. S. The riddle of racism. New York: The Viking Press, 1972.
- Kerfoot, K. M. Nursing management considerations Managing cultural diversity: turning demographic factors into a competitive advantage. Nursing Economics, September/October 1990, 8(5), 354, 362.
- Marriner-Tomey, A., Schwier, B., Maricke, N. & Austin, J. Students' perceptions of ideal and nursing career choices. Nursing Forum, 1990, 25(2), 27-30.
- Perry, I. A black student's reflection on public and private schools. Harvard Educational Review, August, 1988, 58(3), 332-336.
- Quintilian, E. M. Influential factors in recruitment and retention of minority students in a community college. Journal of Allied Health, 1985, 14(1), 63-70.

Richardson, R. C., Jr., & Bender, L. W., Fostering minority access and achievement in higher education. Harvard Education Review, Spring 1992, 62(1), 79-87.

Sargent, A. G. Building a multicultural work environment. Nursing Management, April 1987, 18(4), 45-51.

Schmiedling, N. J. A novel approach to recruitment, retention, and advancement of minority. Nursing Administration Quarterly, Summer 1991, 15(4), 69.

U. S. Labor Department, Occupational Outlook Quarterly, Fall 1989, 33(3), 5-11; 29-37

Wilson, R. Ethnic diversity and differing value systems: a theoretical analysis of educational alienation. Peabody Journal of Education, Summer 1989, 66(4), 42-50.

Winder, A. E. Why young black women don't enter nursing. Nursing Forum, 1971, X(1), 56-63.

APPENDICES

QUESTION: I chose this occupation because (Check ALL applicable answers):

TABLE 1A

<u>REPLY</u>	<u>GROUP I</u> (GASC) N = 29	<u>GROUP II</u> (NW) N = 44
I associated it with the field of allied health professions	5	4
I know what I want to do	15	30
It looks interesting	16	19
Other (Please Specify)(TOTALS)	22	39
I know what this professional does	12	23

Chi-Square = 2.529239 DF = 3
P. 0.4700

QUESTION : I know what courses I should complete in high school to be eligible for entry into a healthcare profession.

TABLE 2A

REPLY	<u>GROUP I</u> (GASC) N = 29	<u>GROUP II</u> (NW) N = 44
Yes	21	24
No	3	6
Maybe	3	9
I do not know	2	3
Other (not stated)	0	1
No Answer	0	1

Chi-square = 3.464067 DF = 4
P = 0.6288

QUESTION: My choice of career was influenced by (Select ALL answers that are appropriate for you).

TABLE 3A

REPLY	GROUP I (GASC) N = 29	GROUP II (NW) N = 44
My parents	8	4
A role model/mentor	3	11
My counselor	1	3
Myself	25	36
My teachers	3	3
A presentation in class	2	3
My friends	1	1
Advertisements	2	1
Other (please specify) (TOTALS)	3	1

Chi-Square = 10.71361 DF = 11
P = 0.4676

QUESTION: I see/interact with my counselor:

TABLE 4A

REPLY	GROUP I (GASC) N = 29	GROUP II (NW) N = 44
Every three months	8	9
At the beginning of each term/semester	8	17
Once a year	4	4
I have never seen/talked to my counselor	0	1
Other (Please specify) (TOTALS)	9	13

Chi-Square = 5.411363 DF = 10
P = 0.8621

QUESTION: If you were accepted into a program of your choice, could you complete the educational requirements without financial assistance.

TABLE 5A

REPLY	<u>GROUP I</u> (GASC) N = 29	<u>GROUP II</u> (NW) N = 44
Yes	6	7
No	11	16
Maybe	8	15
I do not know	3	5
No answer	1	1

Chi-Square = .575386 DF = 4

P = 0.9658

SURVEY INSTRUMENT

QUESTIONNAIRE

1. The definition for Allied Health Professionals is: 26 health-related groups that assist, facilitate, and complement the work of physicians and other healthcare specialists.

Yes No Maybe I do not know

2. Pick one of the occupations listed below as your choice for the future:

Physical Therapist Radiation Therapist

Medical Technologist Nurse

Radiologic Technologist Physician

Other (Please state the occupation/profession of your choice)

3. I chose this occupation because (Check ALL applicable answers):

I associated it with the field of allied health professions

I know what I want to do

It looks interesting My friends think I should

My counselor advised me to Other (Please specify)

My parents said I had to

People will respect me

I know what this professional does

I can complete the requirements for this job in two years

4. I know for sure what each professional listed in question number two (2) does for a living.

Yes No Maybe I do not know Other

5. I know what course I should complete in high school to be eligible for entry into a healthcare profession.

Yes No Maybe I do not know Other

6. If I had a pleasant experience with someone in the healthcare field, I would consider entering that profession.

Yes No Maybe I do not know Other

7. My choice of career was influenced by:

my parents a role model/mentor

my counselor myself

my teachers a presentation in class

my friends advertisements

Other (Please specify)

8. I chose this school because (Select **ALL** answers that are appropriate for you):

It was close to home My parents said I had to

I could take the classes I wanted

I will be employable upon graduation

It offered the best alternative to college

It offered job training in the career of my choice

My counselor suggested it

My friends told me

I was informed in a session organized for that purpose

I wanted to attend this school

Other (Please specify)

9. I see/interact with my counselor:

_____ every three months

_____ at the beginning of each term/semester

_____ once a year

_____ I have never seen/talked to my counselor

_____ Other (Please specify)

10. If I knew someone that was in a particular healthcare field and felt I could turn to them for guidance when I needed it, I would choose a healthcare profession.

___ Yes ___ No ___ Maybe ___ I do not know ___ Other

11. If you were accepted into a program of your choice, could you complete the educational requirements without financial assistance.

___ Yes ___ No ___ Maybe ___ I do not know ___ Other

12. I was born in 19_____

13. I am: _____ Male _____ Female

14. _____ Mexican-American _____ White

_____ Afro-American _____ Asian

_____ Other (Please specify)

Any comments:
