



October 2024

Sources of Information that Introduced Undergraduate Students to their Allied Health Major

Erin Vanderbunt

Southern Illinois University Edwardsville, evander@siue.edu

Follow this and additional works at: <https://nsuworks.nova.edu/ijahsp>



Part of the [Dietetics and Clinical Nutrition Commons](#), [Higher Education Commons](#), [Public Health Commons](#), and the [Speech Pathology and Audiology Commons](#)

Recommended Citation

Vanderbunt E. Sources of Information that Introduced Undergraduate Students to their Allied Health Major. *The Internet Journal of Allied Health Sciences and Practice*. 2024 Oct 04;22(4), Article 16.

This Manuscript is brought to you for free and open access by the Dr. Pallavi Patel College of Health Care Sciences at NSUWorks. It has been accepted for inclusion in *Internet Journal of Allied Health Sciences and Practice* by an authorized editor of NSUWorks. For more information, please contact nsuworks@nova.edu.

Sources of Information that Introduced Undergraduate Students to their Allied Health Major

Abstract

Purpose: Selecting a college major can be overwhelming for undergraduate students. The factors influencing major selection not only impact student success and degree completion time but also affect university recruitment and retention strategies. Therefore, the purpose of this study was to identify the most influential sources of information that first introduced undergraduate students to their current major of nutrition, public health, or speech pathology and sought to determine if any differences existed between the academic majors or by the demographic variables of gender or racial/ethnic backgrounds. **Methods:** A total of 121 undergraduate students from a regional, midwest institution participated in completing an electronic questionnaire, which consisted of ranking the levels of influence of 27 potential college- and non-college related sources of information. **Results:** Personal experience with the major (39%) was reported to be the most influential non-college related source of information, while college introductory courses (38%) were the most consistently reported influential college-related source of information. **Conclusion:** The findings of this study can assist institutions and academic programs in enhancing their recruiting campaigns and marketing materials, making them more effective and informative for prospective students. By providing accurate information for major selection decisions, students can make informed choices earlier in their academic journey, leading to increased satisfaction and a reduced need to extend their time to graduation.

Author Bio(s)

Erin Vanderbunt, EdD, AT, is an Assistant Professor in the Department of Applied Health in the School of Education, Health and Human Behavior at Southern Illinois University Edwardsville.



The Internet Journal of Allied Health Sciences and Practice

Dedicated to allied health professional practice and education

Vol. 22 No. 4 ISSN 1540-580X

Sources of Information that Introduced Undergraduate Students to their Allied Health Major

Erin Vanderbunt

Southern Illinois University

United States

ABSTRACT

Purpose: Selecting a college major can be overwhelming for undergraduate students. The factors influencing major selection not only impact student success and degree completion time but also affect university recruitment and retention strategies. Therefore, the purpose of this study was to identify the most influential sources of information that first introduced undergraduate students to their current major of nutrition, public health, or speech pathology and sought to determine if any differences existed between the academic majors or by the demographic variables of gender or racial/ethnic backgrounds. **Methods:** A total of 121 undergraduate students from a regional, Midwest institution participated in completing an electronic questionnaire, which consisted of ranking the levels of influence of 27 potential college- and non-college related sources of information. **Results:** Personal experience with the major (39%) was reported to be the most influential non-college related source of information, while college introductory courses (38%) were the most consistently reported influential college-related source of information. **Conclusion:** The findings of this study can assist institutions and academic programs in enhancing their recruiting campaigns and marketing materials, making them more effective and informative for prospective students. By providing accurate information for major selection decisions, students can make informed choices earlier in their academic journey, leading to increased satisfaction and a reduced need to extend their time to graduation.

Keywords: major selection, academic major, undergraduate students, applied health, allied health

INTRODUCTION

For college-bound students, the options of which school to attend and which major to pursue can be intimidating. While some students may enter college with a clear professional direction, others may not choose their career path or academic major until later in their academic journey. The influencing factors that contribute to major selection are thought to have an impact not only on student success and time to degree completion, but also on recruitment and retention approaches by the university.^{1,2} Despite the importance of this decision, it is unclear whether students employ effective decision-making strategies when selecting their academic major or if they genuinely understand the career and professional opportunities associated with that major.^{3,4}

Previous studies on academic major selection across all fields have tended to focus on either the demographic characteristics associated with choice of major or factors that serve as predictors of major selection.³⁻⁵ Despite a number of factors being identified in the literature, there is little consistency in their names, categories, or the perspective from which they are explored. Factors such as academic ability, family influence, social and environmental factors, political affiliations, academic self-concept, demographic characteristics, and student personality have all been found to have various levels of influence across disciplines, but it has been argued that these factors should be studied as mutually exclusive from one another.⁴ Beggs, Bantham, and Taylor classified factors from the literature and their own study into six categories: (a) sources of information and influence, (b) job characteristics, (c) fit and interest in subject, (d) characteristic of the major/degree, (e) financial considerations, and (f) psycho/social benefits.³ A key component of their classifications is that they placed the sources of information or influence into their own category. They argued that by including both sources of information and motivating factors within the same survey instrument, students may not be able to differentiate between the influential nature of the factor and the method used to learn about it.³ For example, students in their study reported job characteristics and interest in subject as highly influential, but the source of information as least influential. If the sources of information were not important, the authors questioned where the job characteristics and interest in subject information came from. Consequently, they proposed that future research examine sources of information independently from the motivating or influencing factors.³

The need to have a solid understanding of their potential major and career is important for all undergraduate students, but for those students pursuing allied health care professions that require postgraduate education to obtain licenses and certifications, this need becomes even more urgent. Non-nurse, non-physician health care providers such as speech and language pathologists, audiologists, nutritionists and dietitians, health educators, and occupational and physical therapists are among those listed as allied health occupations by the Association of Schools for Allied Health Professions.⁶ The requirement of an advanced degree for many of these professions often affords the student more freedom in selecting their undergraduate major, as long as they obtain the required pre-requisite courses and, in some cases, required observation or clinical hours. However, this freedom makes it imperative that students pursuing these careers understand the additional academic requirements and select a major that allows them to find academic success without lengthening the time it takes to complete their degree.

For allied health care majors, exposure to health care professionals has been reported to be an essential introduction to the field while high school counselors have been found to have a lower level of influence and may not be adequately prepared to counsel students on the various allied health care professions.⁷⁻¹² Parents have also been found to have some influence on major selection, but whether they are an initial source of information or an influence on the decision-making process is unclear.^{11,13,14} Additionally, traditional university recruiting events such as open houses have been shown to have little influence on academic major, but introductory courses, faculty, and academic advisors are believed to be an influential source introducing students to their majors.^{7,8,15,16}

While it is reasonable to assume that students have greater access to information about academic majors and specific careers by way of the internet and social media resources, it is unknown if they are getting this information from reliable and quality, up to date sources. Additionally, the factors that have previously been found to be influential vary across disciplines and lack consistency, making it difficult for college administrators to create effective recruiting and marketing strategies. Therefore, a current exploration of sources of influential information relevant to today's students is called for and will add to the literature by identifying where allied health undergraduate students are first learning about their major and which of those sources have the greatest impact on students' decisions. Thus, the purpose of this study was to determine the sources of information that first introduced college students to one of three majors in a regional, midwestern university's applied health department, including nutrition, public health, and speech pathology, and to determine if any differences of influence existed between these majors or among the demographic variables of gender and racial/ethnic backgrounds.

METHODS

Participants

Undergraduate students from the majors of nutrition, public health, and speech-language pathology from a mid-sized, regional university in the midwest were invited to complete a survey ranking the influence of a variety of information sources that may have introduced them to their current major. Participation was part of a larger study examining the influential sources of information among all undergraduate students in the university's Department of Applied Health. At the time of data collection, there were 191 students in this population (nutrition $n=29$, public health $n=65$, speech-language pathology $n=97$). Because of the small population size in each major, a total population sampling approach was utilized. The criteria for inclusion were having access to the internet to complete the survey and to be declared in one of the three majors (nutrition, public health, speech-language pathology). Respondents who did not complete the survey were excluded from the study. Electronic informed consent was obtained prior to beginning the survey by each participant. This study was classified as exempt from the Institutional Review Board of the author's university.

Instrument

To date, only one previous study had solely examined sources of information that contributed to major selection; however, several studies exist that include potential sources of information as factors that contributed to major selection as part of a larger survey instrument investigating a variety of influencing and motivating factors.¹³ The sources of information explored by Baldwin and Agho¹³ included high school counselor, health professional in your field of study, health professional not in your field of study, media, college recruitment, and other. Given the advances of both education and technology, additional sources of information needed to be added to this list and therefore, a new survey was developed modeled after their instrument. Development of this new instrument took place in stages. First, a thorough review of the literature was conducted to identify potential sources of information, not factors for decisions, that could be included. Next, a panel of faculty and the applied health academic advisor participated in a careful review of these sources to ensure a thorough list of potential sources was included. These additional sources were then added to a set of 9 demographic and major related questions. A second group of faculty then participated in a follow-up analysis of each item and source of information to ensure clarity and readability. Lastly, the survey was piloted on 10 graduate students from the Department of Applied Health.

The final instrument included 27 sources of information items that were categorized as either college- or non-college related sources of information and was created and distributed through Qualtrics (Qualtrics, Provo, UT). Participants were asked to rank the level of influence from 1 (no influence) to 4 (great influence) for each listed source of information. Additionally, because this study sought to explore any differences in the influential sources of information according to gender and racial/ethnic backgrounds, a brief demographic section was included to collect this information, along with four major-related questions regarding their major declaration status and timeframe.

Procedure

All three undergraduate program directors (nutrition, public health, speech-language pathology) agreed to allow their students to be sent an email invitation. Prior to the first recruitment email, faculty teaching undergraduate courses in the three applied health programs were asked to make a brief announcement notifying students that they would be receiving an email invitation to participate in this research. Data collection took place over a three-week period. Initial recruitment emails with a link to the survey were sent to all students in the three applied health undergraduate programs from the researcher. Additional reminder emails were sent after 3 days, 1 week, and 2 weeks. Automatically generated random identifiers were assigned to participants to monitor participation rates and to prevent duplicate submissions, however no personal identifying information was collected.

Statistical Analyses

Data were exported from Qualtrics into IBM SPSS (IBM Statistics v24, Armonk, NY) for analysis. Frequency distributions were run to identify the most influential sources of the sample at large, while Kruskal-Wallis H tests and Mann-Whitney U tests were conducted with an alpha level of 0.05 to determine if any significantly significant differences in influence existed between majors or among the demographic groups.

RESULTS

A total of 191 students from three majors in an applied health department were invited to complete this survey (nutrition $n=29$, public health $n=65$, speech pathology $n=97$). A total of 121 students responded to the survey invitation, for an overall response rate of 63%. Fourteen responses were removed during data cleaning, leaving 107 surveys for a total usable response rate of 56%. Individual major response rates varied among the three majors as follows: nutrition 86% ($n=25$), public health 35% ($n=23$), and speech pathology 61% ($n=59$).

Demographic summary statistics are presented in Table 1. Most respondents (93.5%) were traditional age (18-24 years), female (92.6%), and Caucasian (79.4%) The majority of responding participants were either juniors (29.0%) or seniors (49.6%).

Table 1. Demographic Summary Statistics for Undergraduate Majors

	Total Sample (N=107)	Nutrition (N=25)	Public Health (N=23)	Speech Pathology (N=59)
Gender	N (%)	N (%)	N (%)	N (%)
Male	8 (7.4)	1 (4.0)	3 (13.0)	4 (6.8)
Female	99 (92.6)	24 (96.0)	20 (87.0)	55 (93.2)
Total	107 (100)	25 (100)	23 (100)	59 (100)
Age Range	N (%)	N (%)	N (%)	N (%)
Traditional (18-24 years)	100 (93.5)	23 (92.0)	19 (82.6)	58 (98.3)
Non-traditional (25 years or older)	7 (6.5)	2 (8.0)	4 (17.3)	1 (1.7)
Total	107 (100)	25 (100)	23 (100)	59 (100)
Racial/Ethnic Background				
African American	11 (10.3)	2 (8.0)	7 (30.4)	2 (3.4)
Latinx/Hispanic	4 (3.7)	0 (0.0)	2 (8.6)	2 (3.4)
Asian	3 (2.8)	0 (0.0)	1 (4.3)	2 (3.4)
Caucasian	85 (79.4)	20 (8.0)	13 (56.5)	52 (88.1)
Other	4 (3.7)	3 (12.0)	0 (0.0)	1 (1.7)
Total	107 (100)	25 (100)	23 (100)	59 (100)
Academic Rank				
Freshman	3 (2.8)	0 (0.0)	0 (0.0)	3 (5.1)
Sophomore	10 (9.3)	1 (4.0)	3 (13.0)	6 (10.2)
Junior	31 (29.0)	6 (24.0)	9 (39.1)	16 (27.1)
Senior	53 (49.6)	15 (60.0)	8 (34.8)	30 (50.8)
5+ years Senior	10 (9.3)	3 (12.0)	3 (13.0)	4 (6.8)
Total	107 (100)	25 (100)	23 (100)	59 (100)

In Table 2, findings of when students decided and declared their majors are presented. Approximately half of nutrition (52%) and speech pathology (45.8%) students reported that their current major is their first and only major ever declared at their current institution; whereas almost half of the public health students (47.8%) transferred into public health from another major on campus. One third of nutrition (32.0%) students and almost half (47.4%) of speech pathology students reported deciding their academic major during high school. The majority of public health students (60.9%) selected their major during their sophomore year of college.

Table 2. Academic Related Summary Statistics for Undergraduate Majors

	Total Sample (N=107)	Nutrition (N=25)	Public Health (N=23)	Speech Pathology (N=59)
Major Declaration Status	N (%)	N (%)	N (%)	N (%)
Current major is the first and only major at current and/or any college	43 (40.2)	13 (52.0)	3 (13.0)	27 (45.8)
Transferred out of another major at current college into current major	28 (26.2)	3 (12.0)	11 (47.8)	14 (23.7)
Transferred from another college, but have the same major	9 (8.4)	2 (8.0)	2 (8.7)	5 (8.4)
Transferred from another college, but didn't select major until current college	27 (25.2)	7 (28.0)	7 (30.4)	13 (22.0)
Total	107 (100)	25 (100)	23 (100)	59 (100)
Major Selection Timeframe	N (%)	N (%)	N (%)	N (%)
Before high school	1 (.9)	0 (0.0)	1 (4.3)	0 (0.0)
During high school	37 (34.6)	8 (32.0)	1 (4.3)	28 (47.4)
As a college freshman	17 (15.9)	6 (24.0)	0 (0.0)	11 (18.6)

As a college sophomore	38 (35.5)	9 (36.0)	14 (60.9)	15 (25.4)
As a college junior	10 (9.3)	0 (0.0)	6 (26.1)	4 (6.8)
As a college senior	1 (0.9)	0 (0.0)	1 (4.3)	0 (0.0)
After working in another career	3 (2.8)	2 (8)	0 (0.0)	1 (1.7)
Total	107 (100)	25 (100)	23 (100)	59 (100)

Frequencies for each source of information for all three majors combined are presented in Tables 3 and 4. Personal experience with the major or field of study was reported to be the most influential (either moderate or great influence) non-college related source of information by approximately 40% of the responding undergraduate majors, followed by a friend or family who is a health professional in the field (35.5%) and independent research (35.5%), and non-friend/family health professional in the major or field (30.8%), Table 4 represents the influence of college related sources. Participants reported Introductory College Course in the Major to be most (moderate or great influence) influential (38.3%), followed by college website (33.6%), College Instructor in major (28%) and a student in the major (27.1%).

Table 3. Level of Influence for Non-College Related Sources of Information for Undergraduate Majors (N=107)

Source	No Influence	Some Influence	Moderate or Great Influence
	N (%)	N (%)	N (%)
High School Advisor or Counselor	91 (85.0)	10 (9.3)	6 (5.6)
High School Class or Teacher	75 (70.1)	22 (20.6)	10 (9.3)
College or Career Fair hosted at High School	93 (86.9)	7 (6.5)	7 (6.5)
Career Aptitude Test taken in high school or taken on own	78 (72.9)	20 (18.7)	9 (8.4)
Friend or Family Member who is a Health Professional in your Major/Field of Study	48 (44.9)	21 (19.6)	38 (35.5)
Health Professional in your Major/Field of Study who is NOT a friend or family member (i.e. shadowing experience during high school)	54 (50.5)	20 (18.7)	33 (30.8)
Personal Experience with the Major/Field of Study (i.e. as a patient or accompanying someone else as a patient)	48 (44.9)	17 (15.9)	42 (39.3)
Parent (Non-health related professional)	50 (46.7)	24 (22.4)	33 (30.8)
Military Recruiter/Military Career Counselor	105 (98.1)	1 (.9)	1 (.9)
General Independent Career/Major Research	47 (43.9)	22 (20.6)	38 (35.5)
Work or employment	79 (73.8)	14 (13.1)	14 (13.1)
Attendance at a professional conference	99 (92.5)	6 (5.6)	2 (1.9)
Other	90 (84.1)	6 (5.6)	6 (5.6)

Table 4. Level of Influence for College Related Sources of Information for Undergraduate Majors (N=107)

Source	No Influence	Some Influence	Moderate or Great Influence
	N (%)	N (%)	N (%)
SIUE Website	34 (31.8)	37 (34.6)	36 (33.6)
SIUE Social Media (i.e. Twitter, Instagram)	92 (86.0)	11 (10.3)	4 (3.7)
SIUE Admissions Counselor	76 (71.0)	17 (15.9)	14 (13.1)
SIUE General Academic Advisor	65 (60.7)	20 (18.7)	22 (20.6)
SIUE Information or Recruiting Event (In-Person)	85 (79.4)	14 (13.1)	8 (7.5)
SIUE Career Development Center	92 (86.0)	6 (5.6)	9 (8.4)
Major-Specific Promotional Print Materials (i.e. brochures, posters on campus)	77 (72.0)	22 (20.6)	8 (7.5)
Major-Specific "Swag" (i.e. t-shirts, water bottles)	94 (87.9)	5 (4.7)	8 (7.5)
Introductory College Course in/about Major	42 (39.3)	24 (22.4)	41 (38.3)
College Course outside of the Major	77 (72.0)	18 (16.8)	12 (11.2)
College Instructor in the Major (not associated with a course)	65 (60.7)	12 (11.2)	30 (28.0)
College Instructor outside of the Major (not associated with a course)	87 (81.3)	12 (11.2)	8 (7.5)
Student in the Major (i.e. friend, coworker)	58 (54.2)	20 (18.7)	29 (27.1)
Career Aptitude Test taken as part of a class at SIUE or through the Career Development Center	97 (90.7)	4 (3.7)	6 (5.6)
Education/Promotion/Awareness Table or Event on campus by the Major or Student Organization	92 (86.0)	9 (8.4)	6 (5.6)
Other SIUE related Source	102 (95.3)	1 (.9)	4 (3.7)

While many of the most influential non-college related sources of information were similar across majors, there were differences in the rankings of those sources. Personal experience with the major or field of study was found to be the most influential source of information for nutrition students (44%) however, parents were identified by public health students (39.1%) as most influential and friend or family members who were health professionals most by speech pathology students (47.5%). Table 5 displays the percentages for the top three most influential non-college related sources of information, identified as having either moderate or great influence, according to major.

Table 5. Most Influential Non-College Related Sources of Information by Major

Source by Major	N (%)
Nutrition (N=25)	
Personal Experience with the Major/Field of Study (i.e. as a patient or accompanying someone else as a patient)	11 (44.0)
General Independent Career/Major Research	11 (44.0)
Parent (Non-health related professional)	7 (28.0)
Public Health (N=23)	
Parent (Non-health related professional)	9 (39.1)
Health Professional in your Major/Field of Study who is NOT a friend or family member (i.e. shadowing experience during high school)	7 (30.4)
Personal Experience with the Major/Field of Study (i.e. as a patient or accompanying someone else as a patient)	7 (30.4)
Speech Pathology (N=59)	
Friend or Family Member who is a Health Professional in your Major/Field of Study	28 (47.5)
Personal Experience with the Major/Field of Study (i.e. as a patient or accompanying someone else as a patient)	24 (40.7)
General Independent Career/Major Research	22 (37.3)

For college-related influential sources of information, introductory college courses in or about the major was most influential for students in nutrition (48%) and speech pathology (40.7%) while the website was the most influential college-related source for students in public health (39.1%). Table 6 shows the top three influential college related sources of information for each academic major.

Table 6. Most Influential College Related Sources of Information by Major

Source by Major	N (%)
Nutrition (N=25)	
Introductory College Course in/about Major	12 (48.0)
SIUE Website	10 (40.0)
College Instructor in the Major (not associated with a course)	9 (36.0)
Public Health (N=23)	
SIUE Website	9 (39.1)
SIUE General Academic Advisor	9 (39.1)
Student in the Major (i.e. friend, coworker)	8 (34.8)
Speech Pathology (N=59)	
Introductory College Course in/about Major	24 (40.7)
SIUE Website	17 (28.8)
College Instructor in the Major (not associated with a course)	17 (28.8)

A Kruskal-Wallis test was performed to determine if the differences in levels of influence were statistically significant across the three academic majors. Distributions were not similar for all groups as assessed by visual inspection of each of the boxplots. Levels of influence were statistically significantly different for friend or family member who is a health professional, $X^2(2) = 13.472$, $p = .001$ and for college general academic advisor, $X^2(2) = 6.923$, $p = .029$. Subsequent pairwise comparisons were performed using Dunn's (1964) procedure. A Bonferroni correction for multiple comparisons was made with statistical significance accepted at the $p < .005$ level. This post hoc analysis revealed a statistically significant difference in level of influence for friend or family member who is a health professional between public health (mean rank = 40.13) and speech pathology (mean rank = 63.06) ($p = .004$) and between nutrition (mean rank = 45.38) and speech pathology (mean rank = 63.06) ($p = .030$) and for general academic advisor between public health (mean rank 67.09) and speech pathology (mean rank = 49.90) ($p = .029$).

When influential sources of information were examined by gender and racial background, similar trends were revealed as with the overall applied health students results. Personal experience, friend or family member in the profession, personal research, introductory college course in the major and parents remained the most influential across all groups. While the overall most influential sources of information remained consistent across groups, non-parametric testing using Mann-Whitney U and Kruskal-Wallis tests did reveal some statistically significant differences within the groups on select sources.

A Mann-Whitney U test was conducted to determine if there were differences in levels of influence for any of the sources of information based on gender: "male" (n = 8), "female" (n = 99). Distributions for sources of information were similar for both groups as assessed by visual inspection of each of the boxplots. Levels of influence were not found to be statistically significantly different for any source of information between males and females.

A Kruskal-Wallis test was conducted to determine if there were any differences in levels of influence for any of the sources of information based on racial/ethnic background. Distributions were not similar for all groups as assessed by visual inspection of each of the boxplots. Levels of influence were statistically significantly different for military recruiters, $X^2(4) = 11.878$, $p = .018$; social media, $X^2(4) = 33.292$, $p = .000$; general academic advising $X^2(4) = 11.969$, $p = .018$; promotional print materials, $X^2(4) = 22.608$, $p = .000$; and major "swag", $X^2(4) = 17.087$, $p = .002$. Subsequent pairwise comparisons were performed using Dunn's (1964) procedure. A Bonferroni correction for multiple comparisons was made with statistical significance accepted at the $p < .005$ level. This post hoc analysis revealed a statistically significant difference in level of influence of military recruiters between African Americans (mean rank = 53.00) and "other" (mean rank = 66.25) ($p = .002$) and between Caucasian (mean rank = 53.64) and "other" ($p = .001$); between Caucasian (mean rank 49.62) and Asian (mean rank = 100.50) ($p = .000$) and between African Americans (mean rank = 61.23) and Asian ($p = .001$) for university social media influence; and between Caucasian (mean rank 50.56) and African American (mean rank = 66.68) ($p = .004$) for major specific promotional "swag".

DISCUSSION

Prior research on the factors that affect college major selection did not differentiate between the motivating or influential factors from the source of that information. Beggs, Bantham, and Taylor argued that presenting these factors together can make it challenging for students to differentiate between the original source of their information and the reason behind their choice of major.³ As a result, this study focused solely on sources of information that were potentially influential in introducing undergraduate students to one of three applied health majors including nutrition, public health, or speech pathology.

Although one third (n=38) of applied health students in this study reported selecting their major before or during high school, less than 10% of students reported high school related sources such as a high school advisor, class or teacher as having either a moderate or great influence in introducing students to their major, which is consistent with previous studies.^{5,7,11,14,19,20} Instead, the most influential non-college related sources of information reported were those that provided personal exposure to the major or field, as well as their own personal research. In this context, exposure refers to having familiarity with the field as a patient, having a connection to someone in the field or academic program, or being exposed to the field through the experiences of a friend or family member who is/was a patient.²¹ When levels of influence were examined within each of the three majors, these personal exposure sources remained influential among all three academic majors of nutrition, public health, and speech pathology but at varying degrees. Although this study focused on the influential sources associated with their academic major and not a specific profession, all three of the majors investigated could lead to allied health care professions. The results of this study support the argument made by previous investigators that both personal and professional experiences with allied health care professionals remain critical in introducing students to both allied health care professions and related majors.^{9,21} Considering the significant impact of these experiences on students, it is suggested that program administrators and professional organizations explore collaborative partnerships with one another and with practicing allied health care professionals. This collaboration would ensure the dissemination of precise and up-to-date information to students, thereby enhancing their understanding of various allied health care professions and allowing them to make a more informed decision regarding the academic path needed to pursue their professional goals.

In addition to health care professionals, one third of students in this study reported parents as having moderate or great influence as a source of information. Previous literature on parental influence on major selection has focused more on their influence of both college and major selection and not specifically as a source of information and have reported mixed results.^{11,13,14,22} The potential influence of the parents must be carefully considered, however, because of the perceived level of support they provide and whether or not the information they are sharing is accurate and up to date.

It is essential to recognize that while exposure to health care professions as an influential source of information has significant value, it can also perpetuate existing disparities and systemic inequalities within the healthcare system. Students and their families from historically underrepresented populations may face limited access to healthcare resources, resulting in fewer opportunities

for exposure compared to their counterparts. This lack of exposure can reinforce the underrepresentation of diverse voices within the field and hinder students' ability to explore a wide range of healthcare professions. Moreover, relying on convenience based personal exposure may overlook the importance of comprehensive and unbiased information dissemination, which should be inclusive and accessible to all students, regardless of their backgrounds. It is crucial to address these potential issues by implementing proactive measures, such as providing mentorship programs, diversity initiatives, and equitable resources, to ensure that students from all backgrounds have equal opportunities to explore and pursue careers in healthcare.

Students pursuing degrees in nutrition and speech pathology identified introductory college courses and instructors within their major as influential sources of information. The goals of these introductory courses differ across programs and institutions. Some seek to acquaint students with professional and career opportunities within a specific field, while others provide an overview of subject-specific material. Despite the variations in objectives, this study suggests that these courses play a crucial role in acquainting students with academic majors and professional opportunities. Consequently, program administrators and faculty members should recognize the potential impact these courses and instructors can have in enhancing students' knowledge and comprehension of their majors and the potential career paths available within their respective fields.

In addition to examining those sources that were reported as influential, it is also important to evaluate the sources that were reported to have limited or no influence. Given that over 60% of students in this study reported selecting their major while in college, program administrators interested in increasing enrollment rates and helping their students who have not yet declared a major should carefully examine not only where students are learning about their major, but also where they are not. This understanding will not only allow students to make more informed decisions, but it can also assist university leaders in determining how best to allocate their resources. For example, 86% of students in this study reported the institution's social media accounts as having no influence. Additionally, college recruiting events (79%), career development center (84%), admissions counselors (71%), and general academic advisors (61%) were also reported to have no influence as a source of information introducing students to their academic major. It is unclear if students did not seek information from these sources or if the sources themselves failed to provide adequate information, but nonetheless, administrators should engage in careful reflection regarding the assumptions associated with these potential sources to ensure they are meeting the needs and expectations of students.

Limitations and Recommendations for Future Research

The results of this study should be interpreted with caution due to several limitations. Firstly, the study was conducted at a single public, regional institution in the Midwest, focusing on students from one specific academic department. Therefore, the generalizability of the findings may be limited and may not be applicable to students in different academic programs or institutions in other regions or of varying sizes. Conducting similar studies across different academic programs and institutions nationwide would yield more comprehensive and conclusive results. Additionally, the response rate among the three academic majors included in the study was not evenly distributed. While the overall response rate was 63%, there were variations among the majors: nutrition had an 86% response rate (n=25), public health had a 35% response rate (n=23), and speech pathology had a 61% response rate (n=59). Moreover, the demographic distribution among survey participants was uneven, with a predominance of females (92%), traditional-age students (94%), and Caucasian individuals (79%), further limiting the generalizability of the results. It is also important to note that at the institution where data was collected, undergraduate students are not required to declare their major upon matriculation. Therefore, some sources of information may not be applicable to institutions where students must declare a major upon enrollment. Lastly, in this study, students were asked to rank the level of influence of each source individually, without directly comparing the influence between the sources. As a result, while the study effectively identified the influence of each source, it was unable to determine their relative comparisons to one another independently. Future research should include multiple institutions of various sizes and focus on individual academic majors. Furthermore, implementing a mixed-method approach, which incorporates follow-up interviews, would be beneficial. This research methodology ensures that students accurately differentiate between the sources that played a role in introducing them to their major and those that simply motivated their decision.

CONCLUSION

This study highlights the importance of examining influential sources of information for college major selection, particularly for those students' pursuing careers in allied health. The findings underscore the significance of personal exposure to the major or field and introductory college courses in shaping students' decisions. Furthermore, this study highlights the need to evaluate sources of information that were reported to have limited or no influence. By understanding where students are and are not obtaining information, universities can allocate resources more effectively and provide accurate guidance to students. Reflecting on assumptions associated with potential information sources, such as college recruiting events, career development centers, and admissions counselors is necessary to ensure they meet students' needs and expectations. With this information, institutions and academic programs can enhance their marketing and recruitment strategies to provide prospective students with the knowledge

needed to make well-informed decisions which, in turn, can lead to an earlier selection of an academic major that aligns with their interests, thus increasing satisfaction while minimizing the need for extended graduation timelines.

REFERENCES

1. Hodges N, Karpova E. Majoring in fashion: A theoretical framework for understanding the decision-making process. *Int J Fash Des, Technol Educ*. 2010;3(2):67–76. doi:10.1080/17543266.2010.481266
2. Vaartstra MB, Kercher VM, Start A, Brown AN, Peterson MD, Mcgrath R. Understanding why undergraduate students declare and continue to study an exercise science-related major. *Int J Exer Sci*. 2017;10(5):807–817. [PMID: 28966716]
3. Beggs JM, Bantham JH, Taylor S. Distinguishing the factors influencing college students' choice of major. *Coll Stud J* 2008;42(2):381–394.
4. Palumbo MV, Rambur B, Mcintosh B, Naud S. Perceptions of an ideal career versus perceptions of six health careers. *J Allied Health*. 2008;37(1):8–14. [PMID:18444434]
5. Stair K, Danjean S, Blackburn JJ, Bunch JC. A major decision: Identifying factors that influence agriculture students' choice of academic major. *J Hum Sci Ext*. 2016;4(2):111–125. doi.10.54718/nmrw9896
6. Association of Schools of Allied Health Professionals. What is Allied Health? Accessed August 13, 2019. <http://asahp.org/what-is>
7. Vanderbunt EM, Brtek D. Sources of Information that introduced exercise science students to their major. *Topics in Exercise Science and Kinesiology*. 2022;3(1):Article 3.
8. Barfield JP, Folio MR, Lam ETC, Zhang J. Factors associated with enrollment in allied health education programs: Development of a predictive scale. *J Allied Health*. 2011;40(2):10. [PMID:21695368]
9. Barfield JP, Cobler DC, Lam ETC, Zhang J, Chitiyo G. Differences between African-American and Caucasian students on enrollment influences and barriers in kinesiology-based allied health education programs. *Adv Physiol Educ*. 2012;36(2):164–169. doi.10.1152/advan.00129.2011
10. Collins PM, Carr C. Exposure to, knowledge of, and interest in occupational therapy and physical therapy as career options. *Open J Occup Ther*. 2018;6(2):12–17. doi.10.15453/2168-6408.1357
11. Bowman P, Smith P. Recruitment issues and potential solutions to increase rehabilitation science applications. *J Allied Health*. 2007;36(3):221–243. [PMID:19759994]
12. Williams C, Dickstein-Fischer L. A national study of school counselors' perceptions of the nursing profession. *Nurs Educ*. 2018;43(4):191–195. doi.10.1097/NNE.0000000000000476
13. Baldwin A, Agho AO. Student recruitment in allied health educational programs: The importance of initial source of contact. *J Allied Health*. 2003; 32(2):65–70. [PMID:12801017]
14. Malgwi CA, Howe MA, Burnaby PA. Influences on students' choice of college major. *J Educ Bus*. 2005;80(5):275–282. doi.10.3200/JOEB.80.5.275-282
15. Joshi A, Amadi C, Alam A, Krudysz MA, Hernandez G. Using data to inform decision making in recruitment of prospective public health students. *Ann Am Acad Political Soc Sci*. 2017;32:108–124. doi.10.1177/0002716209348747
16. O'Toole MF, Szathmary KJ, Thropp JE, Baeri VJ. (2017). Choosing a career path: Why not safety & health? Identifying the factors that influence students' choices: Part 1. *Environ Res*. 2017;13(1):323–329.
17. Qualtrics. Sample size calculator. Accessed July 19, 2019. <https://www.qualtrics.com/blog/calculating-sample-size/>
18. IBM Corp. Released 2015. IBM SPSS Statistics for Windows, Version 24.0. Armonk, NY: IBM Corp.
19. Alexander C, & Fraser, J. The promotion of health careers to high school students in the New England health area: The views of high school careers advisers. *Aust J Rural Health*. 2001;9(4):145–149. doi.10.1046/j.1038-5282.2001.00332.x
20. Roberts-Dobie S, Sirowy L. A major decision: An exploratory study of influences on the choice of the health promotion major. *Am J Health Stud*. 2009;24(1):266–272.
21. Byrne N. Factors influencing the selection of speech pathology as a career: A qualitative analysis utilising the systems theory framework. *Aust J of Career Dev*. 2007;16(3):11–18. doi.10.1177/103841620701600304
22. Byrne N. Exposure to occupational therapy as a factor influencing recruitment to the profession. *Aust Occup Ther J*. 2015;62(4):228-237. doi.10.1111/1440-1630.12191