



4-1-2018

Exposure to, Knowledge of, and Interest in Occupational Therapy and Physical Therapy as Career Options

Prisca M. Collins
Northern Illinois University, pcollins@niu.edu

Cynthia Carr
Governors State University, ccarr@govst.edu

Credentials Display

Prisca M. Collins, PhD, PT
Cynthia Carr, DrOT, MS, OTR/L

Follow this and additional works at: <https://scholarworks.wmich.edu/ojot>

 Part of the [Occupational Therapy Commons](#)

Copyright transfer agreements are not obtained by The Open Journal of Occupational Therapy (OJOT). Reprint permission for this article should be obtained from the corresponding author(s). Click here to view our open access statement regarding user rights and distribution of this article.
DOI: 10.15453/2168-6408.1357

Recommended Citation

Collins, Prisca M. and Carr, Cynthia (2018) "Exposure to, Knowledge of, and Interest in Occupational Therapy and Physical Therapy as Career Options," *The Open Journal of Occupational Therapy*: Vol. 6: Iss. 2, Article 12.
Available at: <https://doi.org/10.15453/2168-6408.1357>

This document has been accepted for inclusion in The Open Journal of Occupational Therapy by the editors. Free, open access is provided by ScholarWorks at WMU. For more information, please contact wmu-scholarworks@wmich.edu.



Exposure to, Knowledge of, and Interest in Occupational Therapy and Physical Therapy as Career Options

Abstract

Lack of awareness and knowledge of the occupational therapy (OT) and physical therapy (PT) professions has been cited as a barrier to consideration of these professions as career options. This study examined the types of exposure to, knowledge of, and career interest in OT and PT of students from underrepresented minority (URM) and non-Hispanic White and Asian American (NHW-AA) populations. A questionnaire was administered to a convenience sample of 150 high school and undergraduate college students. Demographic data and student responses to questions regarding exposure to, knowledge of, and career interest in OT and PT were collected. Descriptive statistics and chi-square tests of association were computed, and qualitative data were analyzed for themes. The study findings revealed limited exposure to and knowledge of the OT profession among URM and NHW-AA students. Even though participants from both groups showed better knowledge about PT, they reported limited to no interest in the professions as careers. Further research is needed to examine contextual factors that may influence student perceptions of the OT and PT professions, including how clinical encounters can best be leveraged to improve public knowledge and consideration of these professions as careers for high school and undergraduate college students.

Comments

The authors disclose no conflicts of interest.

Keywords

career interest, career knowledge, occupational therapy profession, physical therapy profession, underrepresented minority

Cover Page Footnote

A mini grant from the College of Health & Human Services at Governors State University was instrumental in supporting this research. The researchers would like to acknowledge the contributions of the universities, students' ethnic clubs, community colleges, high school fairs, and community organizations, as well as the student participants for their support and assistance in conducting this research. We would also like to thank Dr. Russell Carter for his guidance on the data analysis process.

The occupational therapy (OT) and physical therapy (PT) professions play a key role in promoting individuals' health, wellness, and optimal participation in activities of daily living across the life span. The OT and PT professions continue to be ranked among the best health care jobs in the United States (U.S. Department of Labor, 2018a, 2018b; U.S. News & World Report, 2016). However, it is not clear how accessible these careers are to individuals of diverse racial and ethnic backgrounds. Recruitment of a diverse OT and PT workforce to meet the needs of a multicultural society is of paramount importance to the American Occupational Therapy Association (AOTA, n.d.) and the American Physical Therapy Association (APTA, n.d.), the national OT and PT professional organizations, respectively.

There is limited research regarding high school and undergraduate college students' knowledge about the OT and PT professions as career choices. Scholars have documented that awareness of and knowledge about a career is a prerequisite for consideration of that career (Campbell, Denes, & Morrison, 2000). However, only a few studies have examined the ways in which students from underrepresented minority (URM) populations are exposed to occupational therapists and physical therapists and whether that exposure generates reliable career information and interest. In fact, most of the available literature that examines how people are exposed to these professions is at least 10 years old (Kallus, Noble, Bezner, & Keely, 1999; Rozier, Gilkeson, & Hamilton, 1992; Zayas & McGuigan, 2006) or focuses on subjects from outside of the United States (Dissanayaka & Banneheka, 2014; Puckree, Harinarain, Ramdath, Singh, & Ras, 2011). These facts warrant an investigation into the awareness and knowledge of, exposure to, and interest in the OT and PT professions among high school and undergraduate college students from diverse ethnic and racial backgrounds.

Literature Review

The demand for occupational therapists and physical therapists in the United States continues to grow, with employment projected to increase by 24% for occupational therapists and 28% for physical therapists by the year 2026 (U.S. Department of Labor, 2018a, 2018b). Factors contributing to this demand include an aging population and an increase in morbidity rates due to chronic health conditions like arthritis, obesity, and diabetes (U.S. Department of Labor, 2018b). Insurance coverage provisions of the Patient Protection and Affordable Care Act also have influenced this growth, although potential federal legislative changes could affect this trend (U.S. Department of Health and Human Services, Health Resources and Services Administration, n.d.).

Meeting this demand for OT and PT services will be difficult, as workforce shortages in these professions are projected through the year 2030 (Lin, Zhang, & Dixon, 2015; Zimbelman, Juraschek, Zhang, & Lin, 2010). These shortages are likely to continue to pose a significant barrier to individuals' access to essential health services and contribute to racial and ethnic disparities in health. Furthermore, there is a specific need for therapists from URM groups to join the workforce, as they may help to eliminate racial and ethnic health disparities. The proportion of racial and ethnic minorities in the U.S. population is expected to increase to 56% by the year 2060 (Colby & Ortman, 2014). Studies continue to report that levels of morbidity and mortality are higher among racial and ethnic minorities than among the White non-Hispanic population (Centers for Disease Control and Prevention, 2013; Louie & Ward, 2011). Increasing the number of URMs who work in the health care professions has been proposed as one way to address racial and ethnic health disparities and provide patient-centered quality care in a culturally competent manner (Grumbach & Mendoza, 2008; Smith, Nsiah-Kumi, Jones, & Pamies, 2009). Race concordance between patient and provider has been found to enhance the health care

experience of minority patients by building trust, facilitating patient-centered culturally competent communication, and improving access to essential health services (Kumar, Schlundt, & Wallston, 2009; Street, O'Malley, Cooper, & Haidet, 2008).

Despite the increasingly diverse U.S. population, there has not been a proportionate increase in the number of occupational therapists and physical therapists who are of African American, Hispanic/Latino, or American Indian/Alaskan Native heritage. As a result, these population groups continue to be classified as URMs in the medical and allied health professions (Association of American Medical Colleges, 2017). In comparison to their proportion of the U.S. population, Asians are underrepresented in OT but overrepresented in PT, nursing, medicine, and STEM professions (U.S. Department of Labor, Bureau of Labor Statistics, 2017; National Academies of Sciences, Engineering, and Medicine, 2011). Thus, in this study, Asians were grouped with Whites when examining racial and ethnic representation in the OT and PT professions (see Table 1). For the purposes of this study, URM was used to denote students from underrepresented populations, and NHW-AA was used to denote students from non-Hispanic White and Asian American populations.

Table 1

Proportion of Underrepresented Minorities in the U.S. OT and PT Workforce

Race	% of physical therapy workforce	% of occupational therapy workforce
African American	5.2%	7.5%
Hispanic/Latino	5.3%	6.3%
Asian	9.5%	8.2%

Note. 2016 total U.S. employment for occupations: OT = 118,000; PT = 290,000.

U.S. Department of Labor, Bureau of Labor Statistics. (2017). *Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity.*

Increasing the number of URM practitioners is problematic when one considers the stagnation or decline in the number of URM students currently enrolled in OT and PT programs. For example, data from the Commission on Accreditation in Physical Therapy Education (2018) showed a decline in the percentage of African American students for the academic years 2006-2007 to 2015-2016, while the Hispanic/Latino percentage did not change (see Table 2).

Table 2

Percentage of Students Enrolled in U.S. PT Programs

Race/Ethnicity	Proportion in U.S. population (% in 2015)	% of students in academic year 2006-2007	% of students in academic year 2015-2016
African American	13.3%	4.7%	3.0%
Hispanic/Latino	17.6%	4.4%	4.4%
Asian	5.6%	-	6.8%
White	77.1%	81.2%	77.5%

A recent AOTA Academic Programs Annual Data Report indicated that the percentage of Black/African American OT students across academic master's degree entry-level programs decreased from 6% in 2009-2010 to 5% in 2014 (Harvison, 2015). The percentage of American Indian or Alaskan Native OT students decreased from 1% to 0%. Even though the Hispanic/Latino student numbers increased slightly from 5% to 6%, this increase is not enough to meet the projected demand for URM practitioners. Overall, underrepresentation of African Americans, American Indians/Alaskan Natives, and Hispanics/Latinos in OT and PT programs poses a challenge to these professions' diversification efforts. Individuals from minority backgrounds are reported to be more likely to work in underserved, low-income, and minority communities (Wayne, Kalishman, Jerabek, Timm, & Cosgrove, 2010). Thus, minority underrepresentation in OT and PT, as defined in relation to the proportions of these ethnic and racial groups in the U.S. population, may negatively affect access to these services in underserved, low-income, and minority communities.

Choosing a career is a complex process that can be influenced by many factors, such as age, gender, race, socioeconomic factors, and culture (Howard et al., 2011; Pool, 2012). Career choice must be preceded by an awareness of and knowledge about that career. Moore et al. (2003) interviewed students enrolled in a PT program and found that students from all backgrounds were primarily influenced by family members or volunteer experiences when choosing a career. However, factors such as faulty academic advising and negative experiences associated with basic science courses can discourage students from URM groups more than others from pursuing medicine as a career (Barr, Gonzalez, & Wanat, 2008). Since OT and PT have similar basic science prerequisites, this observation is likely to hold true for those programs.

Various types of career educational programs have been reported as effective in educating high school and college students about careers in the health professions and improving career self-efficacy. These strategies include the use of (a) health careers courses or discipline-specific career courses (Hawkins, Hertweck, Salls, Laird, & Goreczny, 2012; Park, 2015), (b) health professions pipeline and pathway programs (Guerrero et al., 2015), and (c) career information summer camps (Ernst, Belrose, Eckhardt, Hild, & Rodriguez, 2014; Roman-Oyola et al., 2015). Other sources of information about health professions include personal contacts, the media, and career information from school career counselors (Zayas & McGuigan, 2006). However, to date there is limited documentation on whether these strategies generate adequate exposure to, knowledge of, and interest in the professions of OT and PT among URM students. Thus, the purpose of this study was to examine these factors as they relate to OT and PT as career choices for URM students.

Method

For this study, a questionnaire was developed to examine the students' level of exposure to, knowledge of, and interest in a career in OT or PT (see Appendix A). The questionnaire was administered to 150 high school and undergraduate college students at career fairs, community colleges, and universities. Formal definitions of OT and PT and a Likert scale were used to rate the participants' accuracy in their knowledge of both professions. The participants' exposure to OT and PT as well as their potential interest in pursuing a career in those professions was explored using open-ended questions.

Population

Given the contradictory evidence about the willingness of minority individuals to participate in scientific research (Fisher & Kalbaugh, 2011), study participants were intentionally recruited during

career fairs and on school campuses at venues where minority students were likely to gather. Examples of such venues included cafeterias, student center lobbies, minority student organization meetings, and class sessions of courses that attracted a large proportion of minority students.

A convenience sample of 337 students was identified for the survey. Of those, 150 participants ultimately met the inclusion criteria, which required participants to be 18 years of age or older; to have the ability to read and write in English; to be enrolled in high school or in college at the undergraduate level; and to generate a complete, usable questionnaire. Students who did not meet the inclusion criteria were excluded ($n = 187$). The convenience sample included students from eight universities, three community colleges, and one high school in the Chicago area. Approval to conduct this study was granted by the Institutional Review Board at Governors State University. The appropriate authorities at the individual schools granted permission to administer the questionnaire on the school campuses.

Instrument

A 12-item, single-page questionnaire was administered. Three items sought information about the participants' ages, ethnicity, and number of semesters enrolled in a high school or college at the undergraduate level. Seven items were open-ended questions and two items were dichotomous choice "yes/no" questions. The open-ended questions asked for the participants' interpretations of what physical therapists and occupational therapists do, the types of experiences they might have had with an occupational therapist or physical therapist, and their career aspirations.

The investigators, an occupational therapist and a physical therapist, developed the questionnaire based on their experiences conducting career education activities and on a review of the literature (Kallus et al., 1999; Rozier et al., 1992; Zayas & McGuigan, 2006). Open-ended questions were chosen as the best method to capture contextual information related to the participants' experiences with and understanding of the professions in their own words and to avoid the use of multiple choice or matching questions that could be leading and/or impose our viewpoints.

Data Analysis

A Likert scale was developed and used to summarize the extent to which the participants' descriptions of the professions captured key elements that are included in the formal definitions of the OT and PT professions (see Table 3).

Table 3

Rubric for Categorizing Participants' Responses Related to Definitions of the OT and PT Professions

Category	Description
5	Description contains two or more distinct attributes of the profession that are consistent with the profession's definition.
4	Description contains one attribute of the profession, but information is general and may be applicable to any health professional. (e.g., It is a person who helps sick people.)
3	Description has some inaccuracies and/or more strongly describes another health profession. (e.g., Someone who cracks your back if it hurts. Same as a nurse, a chiropractor.)
2	Description is a general statement that does not describe what an occupational therapist or a physical therapist does, but maybe expresses the participant's opinion. (e.g., That's interesting; I would like to become one of those.)
1	Participant reports not knowing or not sure.

As shown in Table 3, using a scale from 1 to 5, the responses provided by the participants were categorized and coded in comparison to the definition for each profession. A score of 5 indicated that the participant described two or more attributes that were distinct and consistent with the definitions listed, and a score of 1 indicated that the participant did not know or provided no response. The reference definitions used were acquired from the APTA (2014) and the AOTA (2011). As shown in Appendix B, the definitions used listed multiple attributes describing the various duties of the profession and the types of clients served.

To ensure consistency in categorizing the participants' responses, we established interrater reliability by independently categorizing a random sample of 10 responses at a time. After three rounds of consistently scoring at 90%-100% consensus, all of the responses to the definitions for each profession were independently categorized. We achieved 90% agreement on the scoring of the OT descriptions and 92% agreement on the scoring of the PT descriptions. Small differences in categorization occurred mainly because of the difficulty of interpreting the participants' grammar or syntax errors. We discussed the statements where there was a variation in categories to reach ultimate consensus on the best-fitting category.

The categorized data were then analyzed using SPSS version 22 (SPSS Inc., Chicago, IL). The SPSS allowed for quantification of the descriptive data collected and analysis of frequencies of demographic variables, level of accuracy of the participants' definitions of the professions, and exploration of the relationships between key variables (see Table 4 for operational definitions of key variables). NVivo qualitative software version 7 was used to input verbatim data from the participants' responses to the open-ended questions about their career interests. The qualitative data were analyzed further by chunking and categorizing identifying themes and nodes about interest and/or a lack of interest in the OT and PT professions.

Table 4

Operational Definitions of Key Variables

Variable	Operational Definition
Career Exposure	How the participants learned about the professions of OT and PT, including the description of any personal encounters with an occupational therapist or a physical therapist.
Level of Knowledge About OT or PT	Categorization of the participant's definition of what an occupational therapist or a physical therapist does, based on the categories listed in Table 3.
Career Interest	Participant's description of whether he/she has an interest in pursuing a career in the profession of OT or PT.
Underrepresented Minority (URM)	Populations that are traditionally reported as underrepresented in the science, technology, engineering, and math (STEM) careers.
Non-Hispanic White and Asian American (NHW-AA)	Populations that are traditionally NOT reported as underrepresented in the science, technology, engineering, and math (STEM) careers.

As indicated previously, for the purposes of this study the racial and ethnic backgrounds of the participants were categorized into two racial and ethnic groups: (a) those who self-described as having a URM background and (b) those who classified themselves as having a background represented in the current majority population, including non-Hispanic Whites (NHW) and Asian Americans (AA).

Results

We initially computed descriptive statistics of the demographic data. We then used the Pearson chi-squared test to examine the relationship between category of knowledge and exposure to OT or PT and interest in becoming an occupational therapist or physical therapist. The following results emerged from the analyses.

Subjects

The study participants ranged in age from 18 to 49 years, with a mean age of 27 years ($N = 150$). Of the 143 participants who provided the name of the academic institution they attended, 63% were university students, 30% were community college students, and 7% were high school students. Of the 150 participants, 60% ($n = 90$) were from URM backgrounds, 31% ($n = 46$) were from non-Hispanic White (NHW) and Asian American (AA) backgrounds, and 9% ($n = 14$) classified themselves as “other” or did not provide race or ethnicity. There was a statistically significant difference in age ($t(128) = 3.41, p < .001$) between the URM students (mean = 29 years) and the NHW-AA students (mean = 23 years).

Knowledge About the OT and PT Professions

Knowledge among URM participants. Nineteen percent ($n = 17$) of the 90 URM participants provided descriptions with two or more distinct attributes of the OT profession, and 17% ($n = 15$) described one general attribute. For the PT profession, 51% ($n = 46$) of the URM participants described two or more distinct attributes that were consistent with the definition of the profession, and 29% ($n = 26$) described one general attribute. Forty-nine percent ($n = 44$) reported that they did not know what the OT profession was or provided no answer, compared to 4% ($n = 4$) who did not know what PT was. Figure 1 shows the URM participants’ results for each category of knowledge.

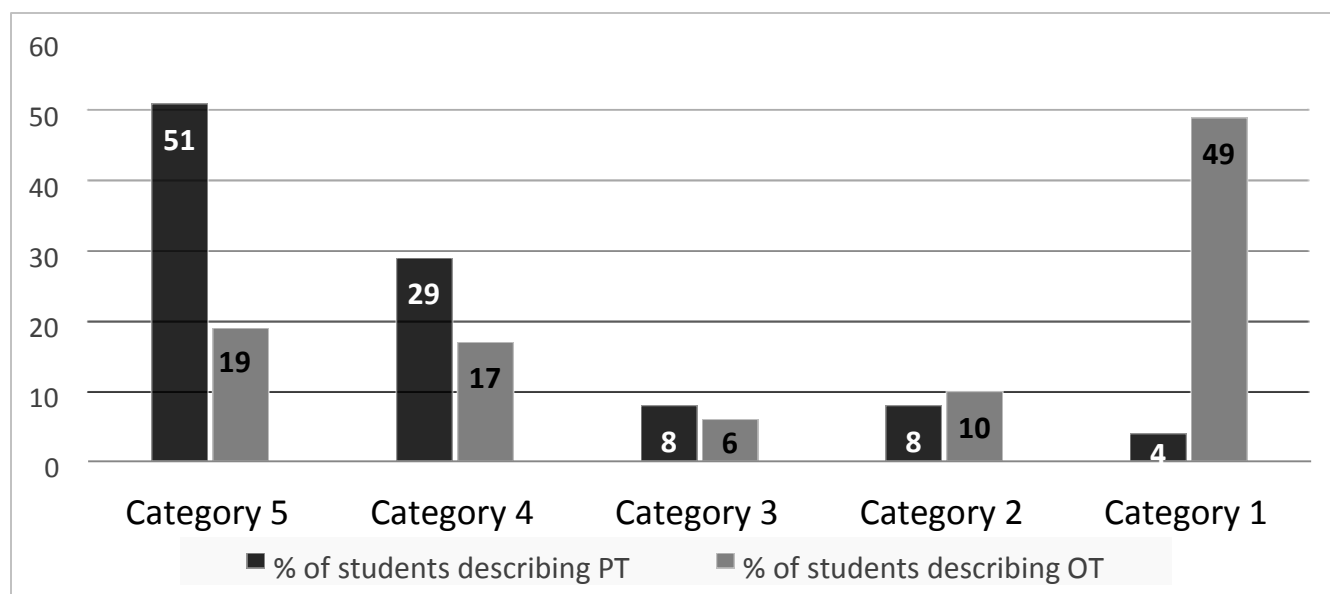


Figure 1. URM students’ knowledge of OT and PT profession attributes; percentages by category.

Knowledge among NHW-AA participants. Twenty-six percent ($n = 12$) of the 46 NHW-AA participants provided descriptions with two or more distinct attributes of the OT profession, and 17% ($n = 8$) described one general attribute. Forty-eight percent of the NHW-AA participants ($n = 22$) described two or more distinct attributes of the PT profession, and 33% ($n = 15$) described one general attribute. Forty-one percent ($n = 19$) reported not knowing what OT was or provided no answer; no participants in this group reported not knowing what PT was or gave no response. Figure 2 shows the NHW-AA participants' results for each category of knowledge.

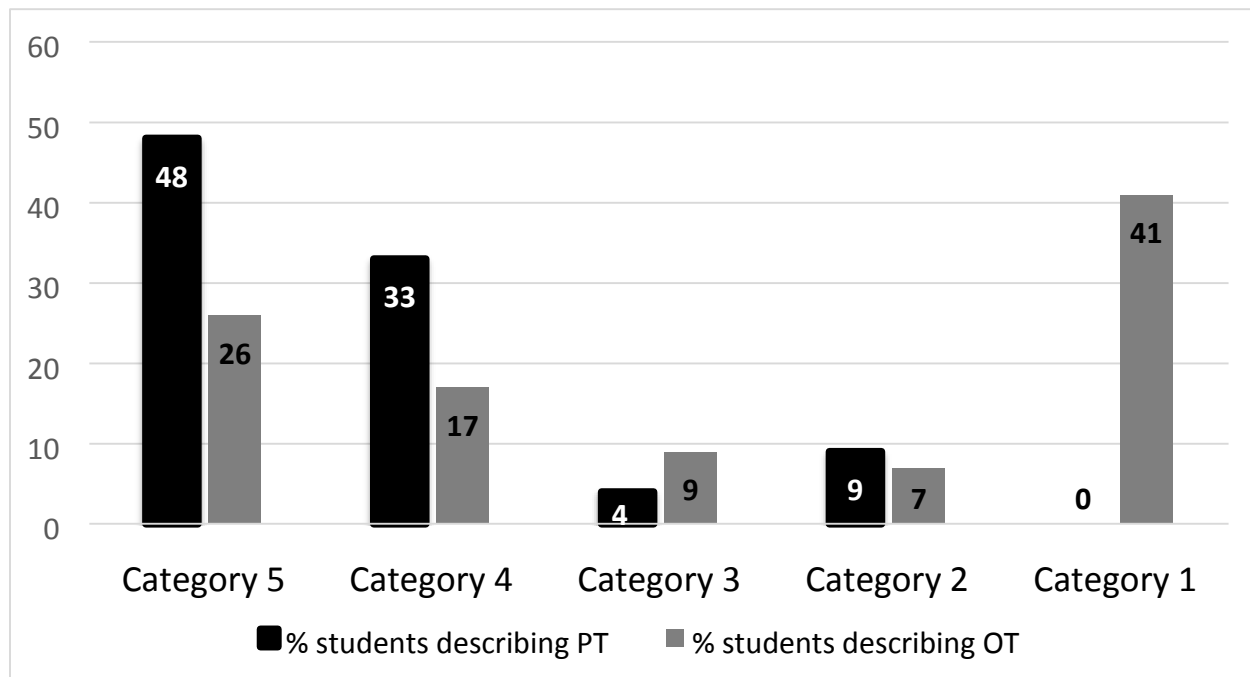


Figure 2. NHW-AA students' knowledge of OT and PT profession attributes; percentages by category.

Exposure to and Interest in the OT Profession

URM participants. Eighty percent ($n = 72$) of the 90 URM participants reported that they had never met an occupational therapist. For those who had, their exposure occurred at a health care facility ($n = 9$), during a relative's treatment ($n = 3$), or during an information session at school ($n = 1$). When asked if they were interested in becoming an occupational therapist, all of the URM participants who had met an occupational therapist responded "no." The most cited reasons for not wanting to become an occupational therapist were lack of interest in the profession ($n = 7$) or that they already had interest in another profession ($n = 2$). The URM participants expressed interest in careers such as business ($n = 15$), nursing ($n = 9$), psychology ($n = 8$), teaching ($n = 8$), information technology ($n = 6$), and criminal justice ($n = 5$).

NHW-AA participants. Exposure to an occupational therapist was limited among the 46 NHW-AA participants; 38 of them reported never having met an occupational therapist. Those who had met an occupational therapist indicated that this occurred when they were receiving care for themselves or a family member ($n = 2$) or during visits to a health care facility ($n = 1$). None of the NHW-AA participants were interested in becoming an occupational therapist. These participants

reported interest in pursuing careers in teaching ($n = 13$), information technology ($n = 5$), and criminal justice ($n = 5$).

Exposure to and Interest in the PT Profession

URM participants. Fifty-one percent ($n = 46$) of the 90 URM participants reported having met a physical therapist; 58% of those indicated they had met that individual when they or a family member received PT. Among those who had met a physical therapist, 46% ($n = 21$) were able to describe two or more distinct attributes of the profession. When asked if they were interested in becoming a physical therapist, 78% ($n = 70$) said “no,” 18% ($n = 16$) said “yes,” and 4% ($n = 4$) did not answer the question. The reasons most often cited for not wanting to become a physical therapist included no interest in the profession, that they already had interest in another profession, that PT did not match their personality, that the requirements were too much, or that they were too old. There was, however, no statistically significant correlation between having met a physical therapist and knowledge level, between knowledge level and the desire to become a physical therapist, or between having met a physical therapist and the desire to become one ($p = .05$).

NHW-AA participants. When asked if they had ever met a physical therapist, 63% of the 46 NHW-AA participants had met one; 75% of those had encountered that person when they or a family member received PT. Other avenues of exposure included a family member or friend who was a physical therapist (13%) and encounters while visiting a health care facility (8%) or through school (4%). Eighty percent of the NHW-AA participants who had met a physical therapist stated that they were not interested in becoming a physical therapist because they already had interest in another profession, the requirements took too much time in school, PT was incompatible with their personality, or they were too old. The relationship between having met a physical therapist and knowledge level, between having met a physical therapist and interest in the profession, or between knowledge level and interest in the profession were not statistically significant ($p = .05$).

Discussion

This study sought to examine the level of exposure to, knowledge of, and career interest in the OT and PT professions among students from diverse racial and ethnic backgrounds. The results indicated that the students had limited exposure to and knowledge of OT and a lack of interest in pursuing a career in either OT or PT. Similar patterns were found in the type of exposure to, knowledge of, and interest in the OT and PT professions for both the URM and the NHW-AA participants. Both groups of students had limited exposure to and knowledge of OT; 80% of the URM participants and 83% of the NHW-AA participants reported never having had an encounter with an occupational therapist. Forty-nine percent of the URM students and 41% of the NHW-AA students reported that they did not know what an occupational therapist was or provided no response.

Findings for the PT profession revealed that only 4% of the URM participants and none of the NHW-AA participants reported not knowing what a physical therapist was or had no response when asked to describe the profession. The proportion of participants from both groups (51% of the URM students and 48% of the NHW-AA students) who could distinctly describe the PT profession was much larger than the proportion of participants from both groups who could distinctly describe the OT profession (19% of the URM students and 26% of the NHW-AA students).

Occupational Therapy

The results of this study suggest at least three disparities in exposure related to personal contact with an occupational therapist and knowledge about OT as a career choice. First, the study revealed a

lack of exposure to the OT profession, with only 20% of the URM participants and 17% of the NHW-AA participants reporting they had met an occupational therapist. Second, a lack of knowledge about OT was evident, with only 19% of the URM participants and 26% of the NHW-AA participants able to identify two or more distinct attributes of the profession. Third, there was a notable lack of interest in the OT profession. None of the participants expressed interest in an OT career. The lack of meaningful experiences with and accurate knowledge of the profession might contribute, in part, to the lack of desire to pursue an OT career. However, this study was not able to isolate these effects.

These findings further highlight the need for more intentional promotion of OT as a career option. Jacobs (2012) discussed the importance of displaying images, using words, and generating actions that inform the public about what OT is and the value of the profession. She suggested that the profession improve “our visibility and our credibility” (p. 660) by using social media and other marketing tools, such as TV advertisements.

Previous studies have explored the potential for providing exposure to the OT profession to grammar and high school students (Wilkinson & Chard, 2005). Still other studies have inquired about the intrinsic and extrinsic factors that influence students’ desires to seek admission to an OT program (Cooperstein & Schwartz, 1992; Rozier et al., 1992). Most agreed that more public exposure to the profession was necessary (Jacobs, 2012; Roman-Oyola et al., 2015) and that federal and state financial funding and resources are needed for students to pursue OT careers. Uncertainty remains about who is responsible for promoting OT as a career: the OT student, the OT practitioner, or the OT manager (Craik & Ross, 2003).

Dr. Carolyn Baum, in her 2004 presidential address, *Building a Professional Tapestry*, identified the need for the OT profession to “promote greater public understanding. . . . heighten the importance of occupational therapy with public and private sector policymakers. . . . [and] recruit the very best to this field” (Baum, 2005, p. 597). The AOTA website has been designed to improve access to information and resources about the profession for interested students, parents, consumers, and counselors, primarily to increase awareness about OT. The website also provides links for accessing educational information about OT careers and employment settings, the profiles of occupational therapists and OT assistants, and demonstrations of diverse role models in the profession (AOTA, 2013, 2017).

Physical Therapy

When compared to earlier findings by Kallus et al. (1999), this study’s findings suggest that students have a better understanding of the PT profession. The Kallus et al. study found that knowledge about PT was lacking among high school students in Texas, and they reported that the public was exposed to and aware of the PT profession but did not necessarily understand specific details. The participants in the current study, however, were predominantly college and university students, with only 7% being high school students. This makes it difficult to compare these results directly.

The APTA (2005) has had a strategic plan for public relations and advertising since 2005. This plan aims to improve awareness of the PT profession among consumers and other professionals. It emphasizes public recognition of physical therapists as movement experts and delivers a consistent message through images and descriptions. This strategic plan specifically targets women between 35 and 70 years of age, as they are considered the key decision makers for family determinations of health care. The APTA also convened a Physical Therapy and Society Summit (PASS) meeting in 2009 where PT leaders and practitioners discussed how the profession could better meet the “current, evolving, and

future societal health care needs” (as cited in Kigin, Rodgers, & Wolf, 2010, p. 1556). One of the outcomes from this summit meeting was to implement strategies that enhance the PT profession’s public identity, including recognition that the various roles of a physical therapist include “prevention, health and wellness” (p. 1561).

The APTA’s efforts reflect intentional, focused strategies for promoting the profession to a broader audience and improving its visibility in the health care environment and broader society. Over time, even though these marketing efforts are not specifically intended for career awareness, they may indirectly influence career decisions. For example, individuals may become more familiar with the care delivered by the profession and consider it as a possible career for themselves or for their children. Parents have been reported to play a significant role in career decision-making, especially during the early predisposition stage (Ozlen & Arnaut, 2013; Pool, 2012). Greater involvement of the PT profession in wellness and health promotion also may improve familiarity and possible interest in exploring the profession as a career choice. Finally, the PT profession has been involved in delivering pro bono services to traditionally underserved communities (Palombaro, Dole, & Lattanzi, 2011; Stickler, Grapczynski, & Ritch, 2013), and this also may help expose these communities to the profession.

Career Choices

The most common form of exposure to the OT and PT professions for both groups of participants in this study was personal contact while (a) receiving OT or PT for themselves, (b) accompanying a family member who was receiving treatment, (c) visiting a health facility, or (d) gathering information from school. These findings are consistent with findings from previous studies that identified personal contact, summer camps, health career courses, and career fairs as sources of career information about the OT and PT professions (Jacobs, 2012; Moore et al., 2003; Roman-Oyola et al., 2015; Zayas & McGuigan, 2006).

Even though the students in this study demonstrated better knowledge about the PT profession than they did about the OT profession, this did not translate into increased interest in the PT profession as a career choice. Many factors have been shown to influence career aspirations, including race and ethnicity; socioeconomic status; gender; the influence of friends, peers, teachers, and parents; and intrinsic personal factors (Griffin, Hutchins, & Meece, 2011; Howard et al., 2011). The interactions between these factors can be complex and dynamic. Moore et al. (2003) found that more similarities than differences existed between URM and NHW-AA students in terms of factors influencing PT as a career choice. Zayas and McGuigan (2006) conducted a study examining how interest in health care careers develops in high school students from underserved communities, including the factors that influence the pursuit of a health care career. They concluded that underserved and disenfranchised community environments posed challenges for furthering health care career interests among youth. They reported that not only are these students less exposed to health professions, but those who are dealt with environmental and systemic barriers in their attempts to enter those professions. Howard et al. (2011), in their study examining differences in career aspirations based on race and ethnicity, gender, and socioeconomic status (SES), reported variable effects in the interactions between SES, race and ethnicity, and career aspirations. They recommended that career services be appropriately tailored to address these mediating and moderating effects.

The participants in this study reported that they were most interested in careers in business, nursing, psychology, teaching, and information technology. Only nursing was in the top list when one

considers medical and allied health professions that are commonly associated with OT and PT. This finding may be similar to the findings of Val Palumbo, Rambur, McIntosh, and Naud (2008), who found that of six health professions (medical laboratory science, nursing, pharmacy, PT, radiation technology, and respiratory therapy), nursing was the only profession perceived to have job security. They reported that none of the six health professions they examined were considered ideal, but instead were viewed as less desirable, less prestigious, and not as technologically advanced.

Limitations

There were some limitations to this study. Data were collected in areas with a significant amount of human traffic, and this may have limited the participants' abilities to think through the questions without distractions. The sample was small, as the study specifically targeted institutions that served greater proportions of URM students; hence, the findings cannot be generalized to all high school and undergraduate college student populations in the United States. Also, there were comparatively few high school students in the study sample (7%), further limiting the generalizability of the results.

This study used a questionnaire with open-ended questions to better capture contextual information related to the participants' experiences and their understanding of the professions. This may, however, have introduced more variations in the interpretations of the questions based on the participants' cultural and socioeconomic backgrounds, and therefore may have biased the results. Future studies may consider incorporating key questions from culturally validated inventories to better isolate these influences.

Conclusion

Even though the participants in this study demonstrated more knowledge about the PT profession than the OT profession, participants in both the URM group and the NHW-AA group expressed limited to no interest in pursuing either of the two professions as a career. This study provides an important first step in our understanding of the level of exposure to, knowledge of, and career interest in the OT and PT professions among students from diverse ethnic backgrounds. The study also provides valuable information about how the professions may be perceived and the factors that may need to be addressed for more effective recruitment efforts.

Further research is needed to examine the contextual factors that may influence high school and undergraduate college students' perceptions of the OT and PT professions. To meet the growing health care needs of our multicultural society, we need to understand how clinical encounters can be optimized to improve the public's knowledge of and career interest in these professions.

Prisca M. Collins, PhD, PT, Assistant Professor of Physical Therapy in the School of Allied & Communicative Disorders, College of Health & Human Sciences at Northern Illinois University, DeKalb, IL.

Cynthia Carr, DrOT, MS, OTR/L, Associate Professor of Occupational Therapy in the College of Health and Human Services at Governors State University, University Park, IL.

References

- American Occupational Therapy Association. (n.d.). *Cultural competency tool kits*. Retrieved from <https://www.aota.org/Practice/Manage/Multicultural/Cultural-Competency-Tool-Kit.aspx>
- American Occupational Therapy Association. (2011). *Definition of occupational therapy practice for the AOTA model practice act*. Retrieved from [http://www.aota.org/~media/Corporate/Files/Advocacy/State/Resources/PracticeAct/Mo del%20Definition%20of%20OT%20Practice%20Adopted%2041411.pdf](http://www.aota.org/~media/Corporate/Files/Advocacy/State/Resources/PracticeAct/Model%20Definition%20of%20OT%20Practice%20Adopted%2041411.pdf)

- American Occupational Therapy Association. (2013). *Your career in occupational therapy: Workforce trends in occupational therapy*. Retrieved from <http://www.aota.org/~media/Corporate/Files/EducationCareers/StudentRecruit/Working/Workforce%20Trends%20in%20OT.pdf>
- American Occupational Therapy Association. (2017). *Diversity in occupational therapy*. Retrieved from <https://www.aota.org/Education-Careers/Considering-OT-Career/Diversity.aspx>
- American Physical Therapy Association. (n.d.). *Cultural competence in physical therapy*. Retrieved from <http://www.apta.org/CulturalCompetence/>
- American Physical Therapy Association. (2005). *APTA strategic plan for public relations and advertising. 2005-2010*. Retrieved from <http://www.apta.org/uploadedFiles/APTAorg/About/Us/Policies/BOD/Plans/PRandAdvertising.pdf>
- American Physical Therapy Association. (2014). *Guide to physical therapist practice 3.0*. Retrieved from <http://guidetoptpractice.apta.org>
- Association of American Medical Colleges. (2017). *Underrepresentation in medicine definition*. Retrieved from <https://www.aamc.org/initiatives/urm/>
- Barr, D. A., Gonzalez, M. E., & Wanat, S. F. (2008). The leaky pipeline: Factors associated with early decline in interest in premedical studies among underrepresented minority undergraduate students. *Academic Medicine*, 83(5), 503-11. <https://dx.doi.org/10.1097/ACM.0b013e31816bd16>
- Baum, C. (2005). Building a professional tapestry. *American Journal of Occupational Therapy*, 59(5), 592-598. <https://doi.org/10.1377/hlthaff.27.2.413>
- Campbell, G., Jr., Denes, R., & Morrison, C., Eds. (2000). *Access denied: Race, ethnicity, and the scientific enterprise*. New York, NY: Oxford University Press.
- Centers for Disease Control and Prevention. (2013). *The state of aging & health in America 2013*. Retrieved from <https://www.cdc.gov/aging/pdf/state-aging-health-in-america-2013.pdf>
- Colby, S. L., & Ortman, J. M. (2014). *Projections of the size and composition of the U.S. population: 2014 to 2060*. Retrieved from <http://www.census.gov/content/dam/Census/library/publications/2015/demo/p25-1143.pdf>
- Commission on Accreditation in Physical Therapy Education. (2018). *Aggregate program data*. Retrieved from <http://www.capteonline.org/AggregateProgramData/>
- Cooperstein, K. R., & Schwartz, K. B. (1992). Reasons for choosing occupational therapy as a profession: Implications for recruitment. *American Journal of Occupational Therapy*, 46(6), 534-539. <http://doi.org/10.5014/ajot.46.6.534>
- Craik, C., & Ross, F. (2003). Promotion of occupational therapy as a career: A survey of occupational therapy managers. *The British Journal of Occupational Therapy*, 66(2), 78-81. <https://doi.org/10.1177/030802260306600206>
- Dissanayaka, T. D., & Banneheka, S. (2014). Awareness in physiotherapy among high school students. *International Journal of Scientific and Research Publications*, 4(7), 1-5. Retrieved from <http://www.ijsrp.org/research-paper-0714/ijsrp-p3123.pdf>
- Ernst, G., Belrose, A., Eckhardt, J., Hild, W., & Rodriguez, L. (2014). Does a participant's perceived self-efficacy of healthcare professions improve following a week-long informational camp for high school students? *Journal of Allied Health*, 43(3), 157-161. Retrieved from <http://www.asahp.org/journal-of-allied-health/>
- Fisher, J. A., & Kalbaugh, C. A. (2011). Challenging assumptions about minority participation in U.S. clinical research. *American Journal of Public Health*, 101(12), 2217-2222. <https://doi.org/10.2105/AJPH.2011.300279>
- Griffin, D., Hutchins, B. C., & Meece, J. L. (2011). Where do rural high school students go to find information about their futures? *Journal of Counseling and Development*, 89(2), 172-181. <https://doi.org/10.1002/j.1556-6678.2011.tb00075.x>
- Grumbach, K., & Mendoza, R. (2008). Disparities in human resources: Addressing the lack of diversity in the health professions. *Health Affairs*, 27(2), 413-422. <https://doi.org/10.1377/hlthaff.27.2.413>
- Guerrero, A. D., Holmes, F. J., Inkelas, M., Perez, V. H., Verdugo, B., & Kuo, A. A. (2015). Evaluation of the pathways for students into health professions: The training of under-represented minority students to pursue maternal and child health professions. *Maternal and Child Health Journal*, 19(2), 265-270. <https://doi.org/10.1007/s10995-014-1620-y>
- Harvison, N. (2015). Academic programs annual data report: Academic year 2014-2015. *The American Occupational Therapy Association*. Retrieved from <http://www.aota.org/~media/Corporate/Files/EducationCareers/Educators/2014-2015-Annual-Data-Report.pdf>
- Hawkins, S., Hertweck, M., Salls, J., Laird, J., & Goreczny, A. J. (2012). Assessing knowledge acquisition of students: Impact of introduction to the health professions course. *The Internet Journal of Allied Health Sciences and Practice*, 10(1), Article 8. <http://nsuworks.nova.edu/ijahsp/vol10/iss1/8/>

- Howard, K. A., Carlstrom, A. H., Katz, A. D., Chew, A. Y., Ray, G. C., Laine, L., & Caulum, D. (2011). Career aspirations of youth: Untangling race/ethnicity, SES, and gender. *Journal of Vocational Behavior*, 79(1), 98-109. <https://doi.org/10.1016/j.jvb.2010.12.002>
- Jacobs, K. (2012). PromOTing occupational therapy: Words, images, and actions. Eleanor Clarke Slagle Lecture. *American Journal of Occupational Therapy*, 66(6), 652-671. <https://dx.doi.org/10.5014/ajot.2012.666001>
- Kallus, K., Noble, D., Bezner, J., & Keely, G. (1999). An assessment of high-school students' knowledge of physical therapy and the factors that influence their knowledge. *Journal of Physical Therapy Education*, 13(1), 4-11. <https://doi.org/10.1097/00001416-199901000-00003>
- Kigin, C. M., Rodgers, M. M., & Wolf, S. L. (2010). The physical therapy and society summit (PASS) meeting: Observations and opportunities. *Physical Therapy*, 90(11), 1555-1567. <https://doi.org/10.2522/ptj.20100138>
- Kumar, D., Schlundt, D. G., & Wallston, K. A. (2009). Patient-physician race concordance and its relationship to perceived health outcomes. *Ethnicity & Disease*, 19(3), 345-351. <https://www.ncbi.nlm.nih.gov/pubmed/19769019>
- Lin, V., Zhang, X., & Dixon, P. (2015). Occupational therapy workforce in the United States: Forecasting nationwide shortages. *PM&R*, 7(9), 946-954. <http://dx.doi.org/10.1016/j.pmrj.2015.02.012>
- Louie, G. H., & Ward, M. M. (2011). Socioeconomic and ethnic differences in disease burden and disparities in physical function in older adults. *American Journal of Public Health*, 101(7), 1322-1329. <https://doi.org/10.2105/AJPH.2010.199455>
- Moore, V., Beilman, L., Rajan, S., Dandrea, J., Nicolosi, J., Shepard, K., & Nixon-Cave, K. (2003). Comparison of recruitment, selection, and retention factors: Students from under-represented and predominantly represented backgrounds seeking careers in physical therapy. *Journal of Physical Therapy Education*, 17(2), 56-66. <https://doi.org/10.1097/00001416-200307000-00009>
- National Academies of Sciences, Engineering, and Medicine. (2011). *Expanding underrepresented minority participation*. Retrieved from https://grants.nih.gov/training/minority_participation.pdf
- Ozlen, M. K., & Arnaut, D. (2013). Career decisions of university students. *Journal of Community Positive Practices*, 13(2), 92-107. Retrieved from <http://jppc.ro/?lang=en&page=current>
- Palombaro, K. M., Dole, R. L., & Lattanzi, J. B. (2011). A case report of a student-led pro bono clinic: A proposed model for meeting student and community needs in a sustainable manner. *Physical Therapy*, 91(11), 1627-1635. <https://doi.org/10.2522/ptj.20100437>
- Park, S. (2015). Effects of discipline-based career course on nursing students' career search self-efficacy, career preparation behavior, and perceptions of career barriers. *Asian Nursing Research*, 9(3), 259-264. <https://doi.org/10.1016/j.anr.2015.06.003>
- Pool, L. (2012). How culture influences choosing nursing as a career. *Whitireia Nursing Journal*, 19, 27-42.
- Puckree, T., Harinarain, R. B., Ramdath, P. B., Singh, R. B., & Ras, J. B. (2011). Knowledge, perceptions and attitudes of final year medical, occupational therapy and sports science students regarding physiotherapy, in KwaZulu natal. *SA Journal of Physiotherapy*, 67(3), 19-26. <https://dx.doi.org/10.4102/sajp.v67i3.50>
- Roman-Oyola, R., Baez-Carrasquillo, N., & Vazquez-Acevedo, N. (2015). Youths' career decisions. An opportunity to increase occupational therapy's future workforce. *OT Practice*, 20(19), 18-20.
- Rozier, C. K., Gilkeson, G. E., & Hamilton, B. L. (1992). Why students choose occupational therapy as a career. *American Journal of Occupational Therapy*, 46(7), 626-632. <https://doi.org/10.5014/ajot.46.7.626>
- Smith, S. G., Nsiah-Kumi, P. A., Jones, P. R., & Pamies, R. J. (2009). Pipeline programs in the health professions, part 1: Preserving diversity and reducing health disparities. *Journal of the National Medical Association*, 101(9), 836-840. [https://doi.org/10.1016/S0027-9684\(15\)31030-0](https://doi.org/10.1016/S0027-9684(15)31030-0)
- Stickler, L., Grapczynski, C., & Ritch, J. (2013). Student perceptions of outcomes from participation in physical therapy pro bono clinics a qualitative study. *Journal of Allied Health*, 42(1), 46-55. <https://www.medscape.com/medline/abstract/23471285>
- Street, R. L., Jr., O'Malley, K. J., Cooper, L.A., & Haidet, P. (2008). Understanding concordance in patient-physician relationships: Personal and ethnic dimensions of shared identity. *Annals of Family Medicine*, 6(3), 198-205. <https://doi.org/10.1370/afm.821>
- U.S. Department of Health and Human Services, Health Resources and Services Administration. (n.d.). *Health workforce projections: Occupational therapy and physical therapy*. Retrieved from <http://bhwh.hrsa.gov/sites/default/files/bhwh/nchwa/projections/occupationalphysicaltherapy.pdf>

- U.S. Department of Labor, Bureau of Labor Statistics. (2017). *Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity*. Retrieved from <https://www.bls.gov/cps/cpsaat11.pdf>
- U.S. Department of Labor, Bureau of Labor Statistics. (2018a). *Occupational outlook handbook: Occupational therapists*. Retrieved from <http://www.bls.gov/ooh/healthcare/occupational-therapists.htm>
- U.S. Department of Labor, Bureau of Labor Statistics. (2018b). *Occupational outlook handbook: Physical therapists*. Retrieved from <http://www.bls.gov/ooh/healthcare/physical-therapists.htm>
- U.S. News & World Report. (2016). *Best health care jobs*. Retrieved from <http://money.usnews.com/careers/best-jobs/rankings/best-healthcare-jobs>
- Val Palumbo, M., Rambur, B., McIntosh, B., & Naud, S. (2008). Perceptions of an ideal career versus perceptions of six health careers. *Journal of Allied Health, 37*(1), 8-14.
- Wayne, S. J., Kalishman, S., Jerabek, R. N., Timm, C., & Cosgrove, E. (2010). Early predictors of physicians' practice in medically underserved communities: A 12-year follow-up study of university of New Mexico School of Medicine graduates. *Academic Medicine, 85*(10), S13-S16. <https://doi.org/10.1097/ACM.0b013e3181ed1bee>
- Wilkinson, J., & Chard, G. (2005). Images of occupational therapy among secondary schoolchildren. *British Journal of Occupational Therapy, 68*(3), 135-139. <https://doi.org/10.1177/030802260506800307>
- Zayas, L. E., & McGuigan, D. (2006). Experiences promoting healthcare career interest among high-school students from underserved communities. *Journal of the National Medical Association, 98*(9), 15-23. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2569708/>
- Zimbelman, J. L., Juraschek, S. P., Zhang, X., & Lin, V. W. (2010). Physical therapy workforce in the United States: Forecasting nationwide shortages. *PM&R, 2*(11), 1021-1029. <https://doi.org/10.1016/j.pmrj.2010.06.015>

Appendix A

Examining Awareness about PT and OT

A Survey

Please answer all the questions to the best of your knowledge.

Survey #: _____ **Age:** _____ **Ethnicity:** _____ **# of semesters taken in college:** _____

1. When someone says “I am a Physical Therapist,” what does that mean to you?

2. When someone says “I am an Occupational Therapist,” what does that mean to you?

3. Have you ever met or interacted with a Physical Therapist?

____ Yes ____ No

4. If yes, under what circumstances did you meet or interact with a Physical Therapist?

5. Have you ever met or interacted with an Occupational Therapist?

____ Yes ____ No

6. If yes, under what circumstances did you meet or interact with an Occupational Therapist?

7. Can you imagine yourself working as a Physical Therapist? Why or why not?

8. Can you imagine yourself working as an Occupational Therapist? Why or why not?

9. What careers are you interested in pursuing? Why?

Appendix B

Reference Definitions of the Occupational Therapy and Physical Therapy Professions

Definition of Occupational Therapy

The practice of occupational therapy means the therapeutic use of occupations, including everyday life activities with individuals, groups, populations, or organizations to support participation, performance, and function in roles and situations in home, school, workplace, community, and other settings. Occupational therapy services are provided for habilitation, rehabilitation, and the promotion of health and wellness to those who have or are at risk for developing an illness, injury, disease, disorder, condition, impairment, disability, activity limitation, or participation restriction. Occupational therapy addresses the physical, cognitive, psychosocial, sensory-perceptual, and other aspects of performance in a variety of contexts and environments to support engagement in occupations that affect physical and mental health, wellbeing, and quality of life. (AOTA, 2011, para. 1)

Definition of Physical Therapy

Physical therapy is a dynamic profession with an established theoretical and scientific base and widespread clinical applications in the restoration, maintenance, and promotion of optimal physical function. Physical therapists are health care professionals who help individuals maintain, restore, and improve movement, activity, and functioning, thereby enabling optimal performance and enhancing health, well-being, and quality of life. Their services prevent, minimize, or eliminate impairments of body functions and structures, activity limitations, and participation restrictions. Physical therapy is provided for individuals of all ages who have or may develop impairments, activity limitations, and participation restrictions related to (1) conditions of the musculoskeletal, neuromuscular, cardiovascular, pulmonary, and/or integumentary systems or (2) the negative effects attributable to unique personal and environmental factors as they relate to human performance. (APTA, 2014, para. 1)