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Zana A. McNeil
Augusta University

Mallory Babin
Augusta University

Erin Pyles
Augusta University

Breanna Trueblood
Augusta University

Bailee Cloutier
Augusta University

See next page for additional authors

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Abstract

The overall goal for any admissions process is to analyze criteria and identify the prospective students that have the highest potential for success in the program's curriculum and in the field as a practicing clinician. The purpose of this study was to examine common academic and non-academic criteria utilized in occupational therapy (OT) admission processes and determine what criteria are used by programs with 100% student pass ratings on their National Board for Certification in Occupational Therapy (NBCOT) exam following completion of an OT program. Admissions criteria components and NBCOT pass rates were collected from the top 107 OT programs, as reported by *US News and World Report*, using publicly available websites for each program and the NBCOT webpage. Descriptive statistics were recorded regarding the frequency of utilizing various admissions criteria. Chi-square tests were utilized to examine the relationship between each admissions criteria component and the NBCOT pass rate. Admissions criteria frequently utilized by the top OT programs included a bachelor's degree prior to matriculation (90.99% programs), minimum undergraduate GPA (55.86%), personal statement (90.09%), letters of recommendation (97.30%), observation hours (74.77%), and an interview (61.26%). Few programs required applicants to submit a minimum math/science GPA (11.71%) or a writing sample (40.54%). Results did not reveal a statistically significant difference between analyzed criteria groups. It is likely that NBCOT pass rates are impacted by other factors that were not publicly available or included in this study.

Keywords

Occupational therapy, admissions criteria, holistic, non-academic measures, academic measures

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Authors

Zana A. McNeil, Mallory Babin, Erin Pyles, Breanna Trueblood, Bailee Cloutier, and Sharon M. Cospser

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Zana McNeil, MHS, OTR/L; Mallory Babin, MHS, OTR/L; Erin Pyles, MHS, OTR/L;
Bailee Cloutier, MHS, OTR/L; Breanna Trueblood, MHS, OTR/L; and
Sharon M. Cospers, EdD, MHS, OTR/L

Augusta University
United States

ABSTRACT

The overall goal for any admissions process is to analyze criteria and identify the prospective students that have the highest potential for success in the program's curriculum and in the field as a practicing clinician. The purpose of this study was to examine common academic and non-academic criteria utilized in occupational therapy (OT) admission processes and determine what criteria are used by programs with 100% student pass ratings on their National Board for Certification in Occupational Therapy (NBCOT) exam following completion of an OT program. Admissions criteria components and NBCOT pass rates were collected from the top 107 OT programs, as reported by *US News and World Report*, using publicly available websites for each program and the NBCOT webpage. Descriptive statistics were recorded regarding the frequency of utilizing various admissions criteria. Chi-square tests were utilized to examine the relationship between each admissions criteria component and the NBCOT pass rate. Admissions criteria frequently utilized by the top OT programs included a bachelor's degree prior to matriculation (90.99% programs), minimum undergraduate GPA (55.86%), personal statement (90.09%), letters of recommendation (97.30%), observation hours (74.77%), and an interview (61.26%). Few programs required applicants to submit a minimum math/science GPA (11.71%) or a writing sample (40.54%). Results did not reveal a statistically significant difference between analyzed criteria groups. It is likely that NBCOT pass rates are impacted by other factors that were not publicly available or included in this study.

Introduction

Establishing effective methods for the admissions process for occupational therapy (OT) programs is vital to ensure future growth and success of the profession. It is through these admission processes that the future leaders of the field are chosen and it is important to verify that these selected applicants have the potential to transform into knowledgeable and effective therapists for their future patients. The overall goal for any allied health program's admissions process is to assess required criteria and identify the prospective students that have the highest potential for success not only in the program's curriculum, but also in the field as practicing clinicians (Bathje et al., 2014; Grice, 2014; Lewis, 2010; Lysaght et al., 2009).

Literature suggests that OT programs heavily weigh factors such as undergraduate grade point average (GPA) and Graduate Record Examination (GRE) performance, but there is debate on whether a holistic approach is more effective in unearthing students that will excel both academically and professionally (Bathje et al., 2014; Grapczynski & Beasley, 2013; Lysaght et al., 2009). A holistic approach to admissions includes viewing the applicant in more than just the academic domain, but rather as a unique individual with a variety of assets and skills (Wise et al., 2017). Other criteria evaluated using a holistic admissions approach may include interpersonal skills, volition, and problem-solving capabilities (Lewis, 2010; Lysaght et al., 2009). These are often assessed through additional non-academic criteria such as an in-person interview to predict an applicant's potential for success in an OT program (Lysaght et al., 2009; Novalis et al., 2017; Salvatori, 2001). Each component of the admissions process has the potential to provide insight into the individual applicant's capabilities and values; however, the frequency of the components utilized and their contribution to producing the most successful OT students are unknown. Although the objective of finding the most suitable applicants is clear in this process, there is still little peer-reviewed evidence on which components of the admissions process predict the highest level of success among students within a program.

Pre-admission Criteria

Academic metrics, such as GPA and GRE scores, have traditionally been considered the benchmark to measure potential success of a student for further graduate school coursework (Lysaght et al., 2009; Roman & Buman, 2019; Wise et al., 2017). Roman and Buman (2019) estimated that nearly 70% of programs dove deeper into this component by extracting the GPA of exclusively the math and science courses to better predict the success of a student in a particular professional school's curriculum. Due to this inconsistency between prerequisite GPA and GPAs in similar OT coursework, researchers consider undergraduate GPA to be a more accurate measure than prerequisite GPA for assessing a student's overall academic abilities in graduate healthcare programs (Lysaght et al., 2009; Roman & Burman, 2019). The literature also suggests that undergraduate GPA, along with the verbal component of the GRE, could more accurately predict healthcare students' graduate cumulative GPA than undergraduate GPA alone (Hocking & Piepenbrock, 2010).

The relevance of requiring certain prerequisite courses has been questioned due to inconsistencies between scores on prerequisite courses and scores of similar course content within the OT program (Lysaght et al., 2009). In addition, Lysaght et al. (2009) found little student support for requiring prerequisites as an admission criterion. Fifty-three percent of the 72 students surveyed suggested that prerequisites should be recommended, but not required. Lysaght et al. (2009) proposed that the elimination of required prerequisite coursework might attract applicants with high academic success in a variety of courses outside of the required prerequisites. According to the authors, these findings suggest there is no relationship between the way applicants perform on preadmission coursework and academic performance in the program. This idea of not including prerequisites as a part of the admission process still requires more evidence supporting this recommendation, although well introduced by Lysaght et al. (2009).

Some argue that the GRE is not an appropriate measure for predicting success in allied health programs because it does not test healthcare-related topics (Hughes, 2019). The GRE was created to measure a student's level of preparedness for graduate-level cognitive demands, not the specific coursework involved in an allied health sciences degree (Hocking & Piepenbrock, 2010). Hocking and Piepenbrock (2010) found that fieldwork performance was most correlated with student's analytical writing scores on the GRE. GRE results might be indicative of an individual's ability to utilize higher level thinking patterns that are required when integrating didactic coursework with the real-time demands of fieldwork rotations (Bathje et al., 2014). More research is required to support the relevance of utilizing academic measures, such as GRE in OT admissions processes, and determining if it accurately relates to students' success in an OT program.

Allied health programs also typically require a specific set of observational hours as part of the application process to ensure that students applying to the program acquire a basic knowledge of the field in which they are seeking careers. According to a study by Roman and Buman (2019), 83% of physical therapy (PT) programs require observation hours, with 14% of these programs including those hours in their acceptance decisions and 11% considered surpassing the minimum amount of observation hours as an indicator of student achievement within the program. Participating in non-PT related activities was considered by 42% of PT programs as a measure for admission (Roman & Buman, 2019). Although this has not been studied in occupational therapy, observation hours may have an important impact on the foundational knowledge future students will use. The direct impact of observation on student success has been debated, however (Roman & Buman, 2019).

An additional component of admission criteria for some programs includes letters of recommendation or references that are submitted along with the application. Kirchner and Holm (1997) conducted a study to determine which components of the admission criteria predicted positive client outcomes and student achievement. The dependent variables of this study included: GPA in OT coursework, client attendance at an onsite clinic, and therapy outcomes of those clients. The independent variables of this study included: undergraduate GPA, GRE scores, reference forms, and essays. The results of

this study suggested that all components of the application criteria, with the exception of reference forms, were useful in predicting student success. Likewise, Salvatori (2001) concluded that letters of recommendation were not heavily weighted in the admission process and that no empirical findings supported their use. Salvatori also argued that personal statements or essays that are included as application components are unreliable forms of criteria due to the chance of external fabrication. While OT-specific literature is limited on this topic, Mitchell et al. (2019) found that less than 25% of Doctor of Physical Therapy (DPT) programs within their study attributed student acceptance or overall success to observational hours, reference letters, or personal statements.

There is conflicting evidence concerning the effectiveness of utilizing an in-person interview for selecting strong applicants for OT programs. One study found that only about 40% of OT programs considered the results of an interview to be an effective way to predict a student's success (Roman & Burman, 2019). The programs that did value the insight gained from these interactions claimed that it allowed non-cognitive features of the applicant to be assessed in ways that are not possible using other application criteria (Novalis et al., 2017; Salvatori, 2001). These interviews are often used as an opportunity to evaluate valuable healthcare related characteristics such as integrity, ethics, professionalism, interpersonal skills and critical thinking capabilities (Grice, 2014). Interviews are also an opportunity to assess the applicant's knowledge of the mission and vision statements of the program and to explain the level of expectation that is required of the students accepted into the program (Salvatori, 2001).

Emotional intelligence can also be evaluated through the use of personality tests and observations during an interview and is described as influential in selecting OT practitioners (Grapczynski & Beasley, 2013). Emotional intelligence includes subcomponents of emotional management, emotional awareness, emotional expression, and emotional reasoning and some argue that it should be considered when selecting applicants for a career in healthcare (Brown et al., 2016; Crowne et al., 2016). Brown's (2016) findings suggested that during fieldwork rotations, having a certain level of emotional intelligence guided OT students to perform to a greater degree in communication and professionalism than did individual personality characteristics.

Despite the potential value of interviews to provide vital information, many programs decide not to include them in their admissions process because the organization of these interviews requires an abundant use of resources that impact faculty, staff, and interviewees. Faculty and staff of the programs are required to spend a great amount of time and resources to organize and conduct these interview days and the interviewees are responsible for travel and time costs (Salvatori, 2001). There are also inconsistencies in the reliability and validity of the interview methods to consider when determining if an interview is worth facilitating.

Salvatori (2001) studied 106 OT students and determined that their academic performance after admittance into a program was not related to their scores from their admissions interviews. Salvatori (2001) stressed that the validity of interviews could be increased by utilizing more structured interview methods with interviewers that were

more highly trained. Another study found that the use of multiple mini interviews could be effective for examining noncognitive traits in applicants (Grice, 2014). Grice (2014) stated that the use of multiple mini interviews decreased the applicant's anxiety towards the process because they felt they had multiple opportunities to produce a positive first impression and it allowed the interviewers to test the applicant's response to a variety of situations (Grice, 2014). The use of multiple mini interviews has also been associated with a significant increase in the diversity of accepted applicants (Wise et al., 2017).

Demographics

According to the 2017-2018 Academic Programs Annual Data Report, published by the American Occupational Therapy Association, 80% of students enrolled in a master's of OT program identify their race as White. It is hypothesized that underrepresented minorities' opportunity for admittance into professional programs could be increased if more holistic admission approaches were implemented (Wise et al., 2017). It is important to strive to admit and educate a diverse group of students in allied health professional programs to better serve our diverse population (Wise et al., 2017).

According to Choi et al. (2018), holistic admissions can be defined as the ability of an institution to look beyond students' grades by giving consideration to the students' experiences and background, all while taking into account how each student will contribute to the learning environment of the school and practice as a professional in the field. When considering the authors' definition of the term, one can conclude that the use of a holistic admissions approach can result in diversity of admitted applicants. Although a holistic admissions approach may have promising outcomes, a major concern with using this type of process is that it will create lower academic standards for allied health programs (Choi et al., 2018). Further exploration into a holistic admissions process within health science programs is warranted to determine their effects on diversity and other outcomes.

In summary, OT programs evaluate academic and/or non-academic (e.g. holistic) factors when selecting applicants for admission. However, the aforementioned categories may vary across programs. Research is needed to understand the methods used and identify those that are most effective at selecting successful OT students. The purpose of this research was to identify the common academic and non-academic criteria utilized in OT admission processes and determine which methods were more highly associated with 100% pass rates on the National Board for Certification in Occupational Therapy (NBCOT) exam.

Methods

Study Design

The study conducted was a descriptive study which aimed to describe the methods used in the admissions processes of top ranked entry-level master's and doctoral OT programs. In addition, we examined the relationship between admissions criteria components and NBCOT pass rates among these OT programs. The independent variables in the study were the admission criteria components that were extracted from

the program websites. The dependent variable for this study was the program's NBCOT pass rate. It was determined there was no need for approval of our research by the Institutional Review Board because the study did not involve human subjects, or an interaction or intervention with human subjects that involved access to identifiable private information. All data utilized was publicly available on each program's respective websites.

This study utilized the 2020 edition of the *U.S. News and World Report* rankings for the category "Best Health Schools", which provides rankings for various health institutions. This study specifically focused on the rankings for OT schools accredited by the Accreditation Council for Occupational Therapy Education (ACOTE). This version of the *U.S. News and World Report* was developed based on a peer assessment survey conducted in the fall of 2019 and early 2020 (Morse et al., 2020). This survey was completed by deans, administrators, and faculty of OT schools across the United States. In 2019, there were 198 OT schools that met the criteria for the *U.S. News and World Report* survey and there was a reported response rate of 44 percent. Occupational therapy schools with tied peer assessment scores were ranked alphabetically in descending order. Due to this ranking methodology, the schools ranked 93-107 were tied. Therefore, of the 198 OT schools from the *U.S. News and World Report* survey, this study focused on the top 107 ranked programs.

Inclusion and Exclusion Criteria

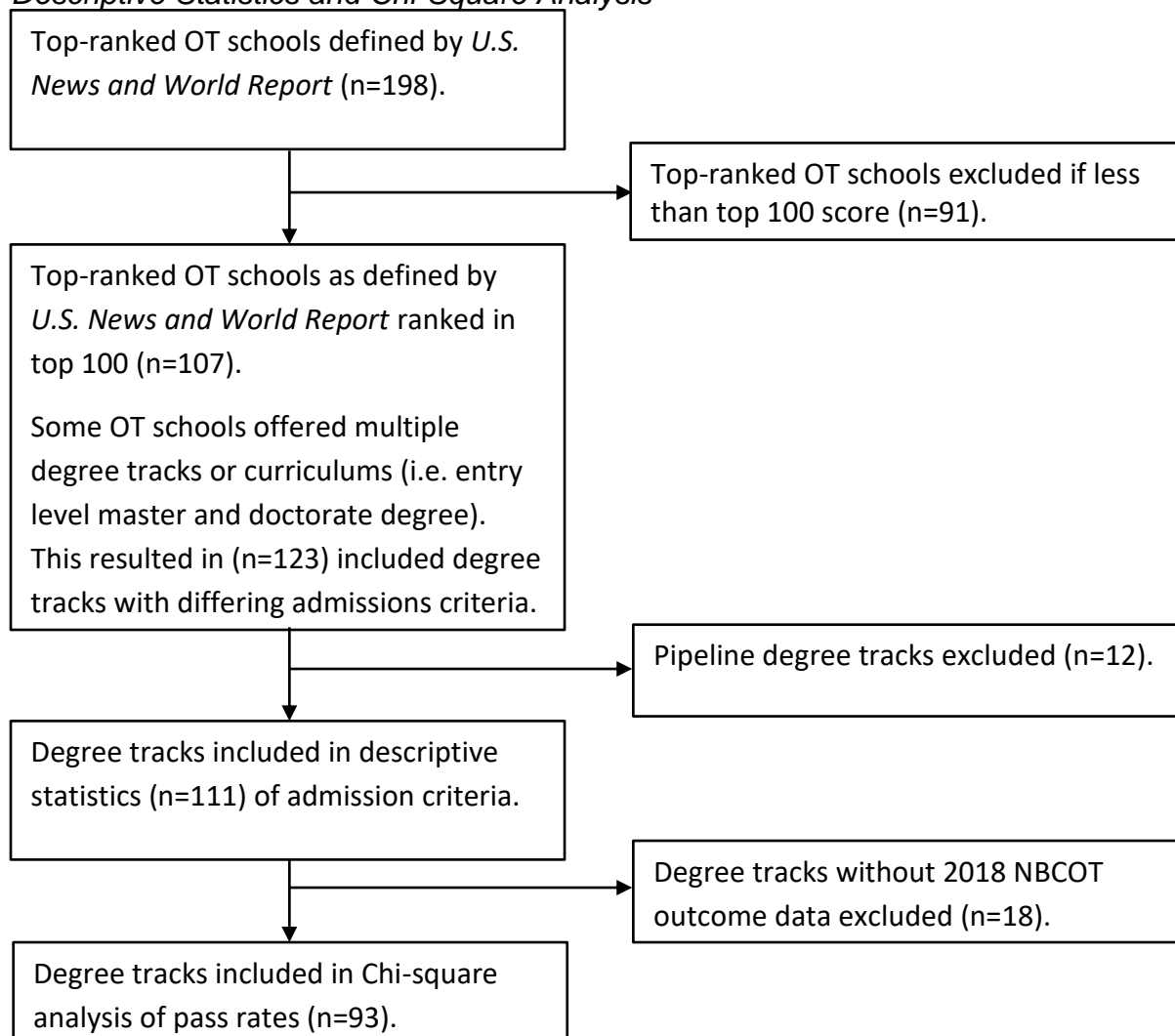
For the purpose of this study, the terms "occupational therapy schools" and "programs" are used synonymously to describe the OT department located at an institution. Degree tracks or curriculums refer to the degree obtained following graduation of the program. OT schools that were included in the study were required to be nationally ranked in the *U.S. News and World Report* top 107 programs and contain at least one of the following degree tracks: an entry level Occupational Therapy Doctorate (OTD), Master of Science in Occupational Therapy (MSOT), or Master of Occupational Therapy (MOT). Programs that offer a curriculum in which the student's bachelor's and master's degree can be earned in a consolidated amount of time are referred to as pipeline degrees. A post professional degree is defined in this study as a curriculum offered to currently licensed practitioners that desire to earn a higher-level degree. We excluded pipeline programs, post-professional programs, non accredited programs, and programs that were ranked below 107 in the *U.S. News and World Report* (2020).

The types of degree programs varied among included schools, resulting in 123 degree tracks extracted from the 107 top ranked OT programs. Following exclusion of the pipeline programs, 111 degree tracks were included in our descriptive statistics. For the purpose of this study, a successful OT student was defined as a student graduating from a program that exhibited a 100% NBCOT overall pass rate. According to NBCOT (2021), for new graduates testing in the year 2018 and 2019 the pass rate was 98% for both years. These pass rates are based on exam candidates who passed the NBCOT exam within one year from their graduation and were not dependent on the number of attempts. Overall passing rates for candidates who took and passed the NBCOT on their first attempt were 81% and 82% for 2018 and 2019 respectively (NBCOT, 2021).

Degree tracks that did not have NBCOT 100% overall pass rates reported were excluded, resulting in 93 degree tracks included within the data analysis of this study. Figure 1 depicts a flow chart of inclusion and exclusion criteria for this study.

Figure 1

Inclusion and Exclusion Criteria of Occupational Therapy Programs and Tracks for Descriptive Statistics and Chi-Square Analysis



Data Extraction

Data utilized in this study was collected from each university's publicly available website by one of five researchers. This data included topics related to the admissions and application process of each program. Data collected from each website included degree obtained, Occupational Therapist Centralized Application Service (OTCAS) utilization, bachelor's degree requirements prior to matriculation, and other enforced requirements such as the GRE assessment, minimum GPA, minimum math/science GPA, letters of recommendation, interview processes, observation hours, essay/writing sample, and prerequisite minimum final grades. If OTCAS was used for application purposes, it was

inferred that three letters of recommendation and a personal statement was needed, since these are requirements for the utilization of the OTCAS system (OTCAS, 2019a; OTCAS, 2019b). Data not specifically stated on the program's websites were assumed as "no" according to a "yes" or "no" dichotomous coding system.

NBCOT pass rates were recorded by each reviewer from NBCOT's publicly available website for the year 2018. NBCOT pass rates for 2019-2020 were not available for the majority of the included programs and tracks during the collection process, and therefore were not included in this study. Data collected from each of these categories were analyzed and critically reviewed by two research team members and then coded according to the system of dichotomous codes utilized by all members.

Data Analysis

The information gathered from the public websites was inserted into a master spreadsheet accessible to all reviewers. Descriptive statistics were recorded regarding the frequency of use of the specified admissions criteria components. Reviewers utilized a standard language to develop a clear system of codes when documenting the data and all discrepancies were discussed as a group to increase inter-rater reliability. One of five reviewers recorded the presence or absence of each program's admission criteria. Each set of data was reviewed by a second researcher to increase inter-rater reliability.

Chi-square statistics for test of independence were performed to analyze the distribution of admissions criteria frequencies for those programs with and without 100% NBCOT pass rates, and how that compared to what was expected in that distribution (Portney & Watkins, 2015). The Chi-square statistic was chosen to analyze our bivariate data in order to determine the distribution of the categorical variables. The expected null hypothesis was that the programs with NBCOT pass rates that were less than 100% did not differ from the programs with NBCOT pass rates that were 100% in their use of the admissions criteria in question. A p-value <0.05 was used to determine if the difference between the two groups was statistically significant.

Results

Characteristics of included degree tracks are outlined in Table 1. The differences between those with and without 100% NBCOT pass rates by presence/absence of admission criteria are outlined in Table 2.

The following academic admissions criteria were required by more than half of the top 111 master's and doctorate level OT curricula: minimum undergraduate GPA (91.89%), bachelor's degree prior to matriculation (90.99%), and GRE scores (55.86%). The only examined academic criteria that was required by less than half of the top 111 masters and doctorate level OT curricula was a math/science GPA (11.71%). Regarding non-academic admissions criteria, the following criteria were required by more than half of the top OT curriculums: letters of recommendation (97.30%), personal statements (90.09%), observation hours (74.77%), and interview (61.26%). Of the OT schools that required observation hours, an average of 25.59 hours were required.

Table 1*Admissions Criteria Utilized by Included Occupational Therapy Degree Tracks (n=111)*

Academic Characteristics	Frequency (%)
Require Minimum Undergrad GPA, Yes	102 (91.89%)
Bachelor Degree Required Prior to Matriculation, Yes	101 (90.99%)
Require GRE, Yes	62 (55.86%)
Require Math/Science GPA, Yes	13 (11.71%)
<i>Require Prerequisite Minimum Grade</i>	
A	0 (0.00%)
B	34 (30.63%)
C	66 (59.46%)
Non-Academic (Holistic) Characteristics	
Require Letters of Recommendation, Yes	108 (97.30%)
Require Personal Statement, Yes	100 (90.09%)
Use OTCAS, Yes	93 (83.78%)
Require Observation Hours, Yes	83 (74.77%)
Require Interview, Yes	68 (61.26%)
Require Essay/Writing Sample, Yes	45 (40.54%)

Abbreviations. GPA = Grade Point Average; GRE = Graduate Record Examination; OTCAS = Occupational Therapy Centralized Application Service.

Table 2*Chi-Square Analysis of Differences in Admission Criteria Between Degree Tracks With and Without 100% NBCOT Pass Rate*

Criteria	100% NBCOT passing rate, n=67 f (%)	<100% NBCOT passing rate, n=26 f (%)	p-value
<i>Academic</i>			
Bachelor Degree Required Prior to Matriculation, Yes	59 (88.06%)	26 (100%)	0.100
Require GRE, Yes	39 (58.21%)	12 (46.15%)	0.294
Require Minimum Undergrad GPA, Yes	60 (89.55%)	25 (96.15%)	0.308
Require Math/Science GPA Yes	8 (11.94%)	5 (19.23%)	0.363
<i>Non-academic</i>			
Use OTCAS, Yes	52 (77.61%)	24 (92.31%)	0.100
Require Personal Statement, Yes	58 (86.57%)	25 (96.15%)	0.180
Require Letters of Recommendation, Yes	66 (98.51%)	25 (96.15%)	0.483
Require Interview, Yes	40 (59.70%)	16 (61.54%)	0.871
Require Observation Hours, Yes	52 (77.61%)	17 (65.38%)	0.227
Require Essay/Writing Sample, Yes	27 (40.30%)	12 (46.15%)	0.608

Abbreviations. GPA = Grade Point Average; GRE = Graduate Record Examination; OTCAS = Occupational Therapy Centralized Application Service.

Discussion

The purpose of the current study was to identify the common academic and non academic criteria utilized in OT admission processes and determine which methods distinguish programs with successful students who pass their NBCOT exam following completion of an OT program. Similar to past studies conducted on post-professional programs, we also found that the majority of top ranked OT tracks (91.89%) utilized undergraduate GPA in their admissions formula (Roman & Burman, 2019). These tracks required an average undergraduate GPA of 2.78 on a 4.0 scale as the minimum requirement for acceptance. However, undergraduate GPA in the admissions process was not different between programs with and without 100% NBCOT pass rates. We conclude that although programs consider the minimum undergraduate GPA to be indicative of a student's preparedness to withstand the rigor of graduate level coursework, it may not be an overall predictor of student success in passing their NBCOT exam. As a result, further studies using regression analysis are needed to determine whether undergraduate GPA is predictive of NBCOT results.

Previously conducted research demonstrates that nearly 70% of post professional programs use math/science GPA in their admissions processes (Roman & Burman, 2019); however, we found that only 11.71% of the included OT tracks required a math/science GPA in their admissions criteria. This suggests that OT programs may place less emphasis than PT programs on skills related to success in math/science courses alone, and instead focus more on courses developing skills that will produce a well rounded student which a minimum undergraduate GPA may represent more accurately. In addition, there was no statistically significant difference for the inclusion of a minimum math/science GPA between programs with 100% NBCOT pass rates and those with less than 100% NBCOT pass rates. These findings may suggest that math/science GPA is not correlated with producing OT students who will pass the NBCOT exam and may also explain the low occurrence of top OT programs utilizing this academic measure within their admissions processes.

GRE Scores

In a previous study, it has been concluded that undergraduate GPA scores in conjunction with GRE scores are valuable in demonstrating student success in allied health programs (Hocking & Piepenbrock, 2010). Although just over half (55.86%) of included programs require applicants to report GRE scores, only 58.21% of programs with 100% NBCOT pass rates utilize GRE scores in their admissions processes. This finding suggests that programs are not convinced of the GRE's effectiveness in predicting the success of their students, despite its intended purpose of evaluating a student's preparedness for the cognitive demands of graduate-school (Hocking & Piepenbrock, 2010). This is also despite Bathje and colleagues' (2014) findings that showed a relationship between GRE scores and fieldwork performance.

Observation Hours

Our study found that 74.77% of included programs required observation hours prior to admission. These results are congruent with a study conducted by Roman and Burman (2019) who found that 83% of PT programs, another health science discipline, required observation hours. Requiring observation hours of students interested in pursuing an OT profession intends to aid in increasing their knowledge of the field and solidifying their desire to continue with the application process. This suggests that OT schools that required observation hours were expecting students to be exposed to at least one OT setting, including various interventions used by the therapists. This foundational knowledge may aid in success within the OT curriculum due to prior exposure to certain areas of the profession.

Letters of Recommendation

Results of the current study demonstrate that 97.30% of the top OT programs require letters of recommendation and 98.51% of schools with 100% NBCOT pass rates require letters of recommendation in their admission processes. Although a previous study found that letters of recommendation were not a major factor in making admissions decisions, current OT admissions processes continue to utilize them. This may suggest that programs are shifting towards a more holistic approach when selecting applicants as letters of recommendation have the potential to highlight characteristics of an applicant that cannot be portrayed using academic only criteria. One caveat, for the current study in particular, is that percentages of programs requiring letters of recommendation were based on the assumption that programs using OTCAS were using the letters of recommendation in their admission decisions required by the OTCAS system. However, in some instances, programs utilizing OTCAS may not factor in the letters of recommendation in their admissions process.

Similar to Salvatori's (2001) findings, Mitchell et al. (2019) estimated that less than 25% of DPT programs attributed student success to observational hours, reference letters, or personal statements. This finding was supported in this study as there was no statistically significant difference in the utilization of these three criteria between OT programs with 100% NBCOT pass rates and those with less than 100% NBCOT pass rates.

Interviews

Overall, 61.26% of the total programs included in this study required interviews as a part of their admissions process. This is in contrast to past research estimating that less than half of the allied health programs considered the results of an interview to be an effective way to predict a student's success (Roman & Burman, 2019). While interviews may be beneficial in identifying characteristics of applicants that are difficult to assess through paper such as professionalism, personability, and critical thinking skills, they are often time consuming and require resources that many programs may not have available. In addition, we found there was no statistically significant difference in the percentage of programs requiring an interview between programs with less than 100% NBCOT pass rates (61.54%) and programs with 100% NBCOT pass rates (59.70%). It is unclear whether interviews are valuable to the OT admissions process.

Holistic Approach

Our findings suggest that programs were using both non-academic and academic metrics, and that programs were assessing applicants on lived experiences that complemented their academic abilities and not just their academic competency. Based on the results of this study, it can be inferred that OT admissions departments of the included programs were utilizing a holistic approach that blended academic and non-academic metrics. By utilizing this style of admissions, programs aim to produce successful OT practitioners who will further advance the field of OT and provide high quality services to future clients.

Overall, no statistically significant differences were found between programs with 100% NBCOT pass rates and those with less than 100% NBCOT pass rates for any of the examined academic nor non-academic admissions criteria. This suggests that although admissions criteria may be indicative of student success within a program, it does not impact a student's success as defined as passing the NBCOT exam. Since the programs we analyzed all had high passing rates this could account for the fact that there were no differences, due to the lack of variability. Other factors, outside of admissions criteria, are likely associated with a program's overall NBCOT pass rate.

Future Research

Future research should be conducted to address other factors that could be more strongly associated with a program's overall NBCOT pass rate. Perhaps rather than focusing on information available on publicly available websites, future research should examine qualitative evidence gathered from program faculty themselves as this would better reflect the intentions and methods used by programs to produce successful students. This may include lived experiences of students, students' fieldwork performance, or specific curriculum utilized within an OT program itself. In addition, if the data permitted, a multiple regression analysis could be performed to increase the rigor of the study and help identify admissions criteria that were predictive of NBCOT exam success.

In addition, future researchers could compare the highest ranked programs to the lowest ranked programs in their analysis to gain more knowledge about the admissions criteria utilized by the entirety of available OT programs. For example, making comparisons between the top 100 programs versus the bottom 100 programs may also yield more statistically significant results assuming that a program's rank is, in part, attributable to their NBCOT pass rate.

Limitations

The current study had a number of limitations regarding data extraction. One such limitation would be the frequency of change of the websites' publicly available information from which the data was gathered. Reviewers found inconsistencies in the data gathered from examined websites as criteria was continuously updated for the following year's admissions processes. Data was also collected during the beginning of the coronavirus pandemic which influenced the decision making of some institutions in making exceptions to certain criteria such as observation hour requirements. This

affected the ability of researchers to extract consistent and accurate data from websites and introduced the potential for historical bias. It is unclear whether the changes made to admissions criteria will be permanent, and adds to the fluidity of documented criteria.

In addition, the programs investigated were obtained from *U.S News and World Report* rankings (Morse et al., 2020). The methodology behind this ranking system was not described in detail and therefore, the reasoning behind the rankings of the top OT schools is unclear. This directly affects which schools were included in the current study and subsequently has the potential to skew the study's findings.

The current study was unable to include pipeline programs and transitioning programs in its analysis, thus impacting its ability to accurately assess the entirety of the top 107 schools. Pipeline programs were not included in the study as their admissions criteria greatly differed from that of traditional entry level programs and would therefore skew the data towards outlier criteria in the admissions process. However, graduates from these programs also take the NBCOT exam and will become practicing OT clinicians. It would be important to identify alternative variables that could also be assessed in pipeline programs. The outcome data utilized in future studies may also need to be revised in order to assess transitioning programs. As more schools begin their doctoral programs, researchers will need to be creative in their methods to acquire outcome data that accurately depicts the success of students graduating from these programs.

In addition, the data analyzed in this study were dichotomous rather than continuous, limiting the strength of conclusions that can be drawn. If exact scores of students on admissions criteria and the NBCOT exam were available, multiple regression analyses could be conducted to provide data that would allow for stronger conclusions. Many of the schools which were listed as less than 100% passing rate for the year 2018 had rates of 90-99%. However, this information was not publicly available to reviewers at the time of this study, thus limiting the strength of the conclusions drawn.

Conclusion

This study aimed to evaluate the association of both academic and non academic metrics used to identify successful students defined by passing their NBCOT exam. This study successfully identified these admissions criteria, however there was no statistical difference between OT programs with and without 100% NBCOT passing rates on any specific admissions criteria. As a result, it can be concluded that admissions requirements represent the minimum standards set by a program for student inclusion, and it is likely that NBCOT pass rates are impacted by other factors that were not publicly available or included in this study. Future research is needed to investigate the relationship of these criteria to specific program curriculums or measurements, such as number of students passing fieldwork and performance on skills assessments within the program courses. It is beneficial for the growth of the OT profession to examine alternative variables, outside of the scope of admissions criteria, that could affect the development of students who are successful both in the classroom and in practice.

References

- Academic Programs Annual Data Report. (2018). *American Occupational Therapy Association*, 10.
<https://www.aota.org/~media/Corporate/Files/EducationCareers/Educators/2017-2018-Annual-Data-Report.pdf>
- Bathje, M., Ozelie, R., & Deavila, E. (2014). The relationship between admission criteria and fieldwork performance in a masters-level OT program: Implications for admissions. *Open Journal of Occupational Therapy*, 2(3), 1-14.
<https://doi.org/10.15453/2168-6408.1110>
- Brown, T., Williams, B., & Etherington, J. (2016). Emotional intelligence and personality traits as predictors of occupational therapy students' practice education performance: A cross-sectional study. *Occupational Therapy International*, 23(4), 412-424. <https://doi.org/10.1002/oti.1443>
- Choi, A. N., Flowers, S. K., & Heldenbrand, S. D. (2018). Becoming more holistic: A literature review of nonacademic factors in the admissions process of colleges and schools of pharmacy and other health professions. *Currents in Pharmacy Teaching and Learning*, 10(10), 1429-1437.
<https://doi.org/10.1016/j.cptl.2018.07.013>
- Crowne, K. A., Young, T. M., Goldman, B., Patterson, B., Krouse, A. M & Proenca, J. (2016). Leading nurses: Emotional intelligence and leadership development effectiveness. *Leadership in Health Services*, 30(3), 217-232.
<https://doi.org/10.1108/LHS-12-2015-0055>
- Grapczynski, C. A., & Beasley, J. (2013). Occupational therapy admissions: professionalization and personality. *Journal of Allied Health*, 42(2), 112–119.
- Grice, K. (2014). Use of multiple mini-interviews for occupational therapy admissions. *Journal of Allied Health* 43(1), 57 -61.
- Hocking, J., & Piepenbrock, K. (2010). Predictive ability of the graduate record examination and its usage across physician assistant programs. *Journal of Physician Assistant Education*, 21(4), 18–22.
<https://doi.org/10.1097/01367895-201021040-00002>
- Hughes, E. S. (2019). Mismatch between proposed ability concepts of graduate record examination and critical thinking skills of physical therapy applicants suggested by expert panel in the United States. *Journal of Educational Evaluation for Health Professions*, 16, 1–24. <https://doi.org/10.3352/jeehp.2019.16.24>
- Kirchner, G.L., & Holm, M.B. (1997). Prediction of academic and clinical performance of occupational therapy students in an entry-level master's program. *American Journal of Occupational Therapy*, 51(9), 775–779.
<https://doi.org/10.5014/ajot.51.9.775>
- Lewis, E. (2010). Emotional intelligence as a predictor for clinical performance in professional physical therapy students. *Internet Journal of Allied Health Sciences & Practice*, 8(4), 1–8. <https://doi.org/10.21276/apjhs.2018.5.3.39>
- Lysaght, R., Donnelly, C., & Villeneuve, M. (2009). Factors predicting applicant outcomes in occupational therapy education. *Canadian Journal of Occupational Therapy / Revue Canadienne D'Ergothérapie*, 76(1), 38–47.
<https://doi.org/10.1177/000841740907600110>

- Mitchell, K., Ellison, J., & Gleeson, P. (2019). Current practices and perceptions of admission criteria at physical therapist education programs in the United States. *Journal of Physical Therapy Education*, 33(1), 55–63. <https://doi.org/10.1097/JTE.000000000000082>
- Morse, R., Castonguay, A., & Vega-Rodriguez, J. (2020). The Best Occupational Therapy Programs in America, Ranked. <https://www.usnews.com/best-graduate-schools/top-healthschools/occupationaltherapy-rankings>
- NBCOT The National Board for Certification in Occupational Therapy. (2021). Summary of certification activities. <https://www.nbcot.org/en/Public/About-NBCOT>
- Novalis, S. D., Cyranowski, J. M., & Dolhi, C. D. (2017). Passing the NBCOT examination: Preadmission, academic, and fieldwork factors. *Open Journal of Occupational Therapy (OJOT)*, 5(4), 1–16. <https://doi.org/10.15453/2168-6408.1341>
- OTCAS The Centralized Application Service for Occupational Therapy. (2019a). Evaluations. https://help.liaisonedu.com/OTCAS_Applicant_Help_Center/Filling_Out_Your_OTCAS_Application/Supporting_Information/01_Evaluations
- OTCAS The Centralized Application Service for Occupational Therapy. (2019b). Documents. https://help.liaisonedu.com/OTCAS_Applicant_Help_Center/Filling_Out_Your_OTCAS_Application/Supporting_Information/06_Documents
- Portney, L., & Watkins, M. (2015). *Foundations of clinical research: Applications to practice*. F.A. Davis Company
- Roman, G., & Buman, M. P. (2019). Preadmission predictors of graduation success from a physical therapy education program in the United States. *Journal of Educational Evaluation for Health Professions*, 16, 1–7. <https://doi.org/doi:10.3352/jeehp.2019.16.5>
- Salvatori, P. (2001). Reliability and validity of admissions tools used to select students for the health professions. *Advances in Health Sciences Education: Theory and Practice*, 6(2), 159–175. <https://doi.org/10.1023/A:1011489618208>
- Wise, D., Dominguez, J., Kapasi, Z., Williams-York, B., Moerchen, V., Brooks, S., & Ross, L. J. (2017). Defining underrepresented minorities and promoting holistic review admission strategies in physical therapist education. *Journal of Physical Therapy Education*, 31(4), 8–13. <https://doi.org/10.1097/JTE.000000000000009>