2019

Accessibility and Perceived Value of Pre-Admission Clinical Contact Hours: A Physical Therapy Academic Faculty Perspective

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Accessibility and Perceived Value of Pre-Admission Clinical Contact Hours: A Physical Therapy Academic Faculty Perspective

by

Andrew Nelson

Doctor of Physical Therapy
University of North Dakota, 2019

Bachelor of Science – Kinesiology
University of Minnesota, 2016

A Scholarly Project Submitted to the Faculty of the University of North Dakota Department of Physical Therapy School of Medicine and Health Sciences

In Partial Fulfillment of the requirements for the Degree of Doctor of Physical Therapy

Grand Forks, North Dakota
May 2019
This Scholarly Project, submitted by Andrew Nelson in partial fulfillment of the requirements for the Degree of Doctor of Physical Therapy from the University of North Dakota, has been read by the Advisor and Chairperson of Physical Therapy under whom the work has been done and is hereby approved.

Renee McCoy  
Graduate School Advisor

David Kelly  
Chairperson, Physical Therapy
PERMISSION

Title
Accessibility and Perceived Value of Pre-Admission Clinical Contact Hours: A Physical Therapy Academic Faculty Perspective

Department
Physical Therapy

Degree
Doctor of Physical Therapy

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Date 12/20/18
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ABSTRACT

Background and Purpose: This study determines the usefulness of pre-admission clinical contact hours obtained by potential physical therapy students as perceived by faculty of Doctor of Physical Therapy programs. Within the last ten years there is limited research regarding the effectiveness of pre-admission clinical contact hours in physical therapy. These results can be used to determine prerequisites for physical therapy programs in the future. Methods: An electronic survey link was sent via e-mail to program chairpersons or Directors of Clinical Education (DCE) of all accredited Physical Therapy programs, asking them to distribute the survey to their academic faculty. Two reminder emails containing the link were sent out to maximize response rate. Survey items gathered information related to pre-admission clinical contact hour requirements and perceived usefulness of the hours. Results: A total of 217 surveys were returned. These surveys represented 31 states and 85% of the responses indicated pre-admission clinical contact hours are required. Of 194 respondents, 91% agree that contact hours are beneficial with 36% strongly agreeing, 34% agreeing, and 21% somewhat agreeing. An open-ended question regarding the benefits of contact hours yielded responses that primarily fell into two categories. Exposure to different patients and settings had the highest prevalence with 169 (48%) responses and interactions with a PT/mentor for learning experiences was next most common with 130 (35%) responses. Of 163 responses nearly half (47%) of responding academic faculty stated their students had challenges obtaining clinical contact hours. Upon further analysis this was most due to accessing a setting (24%), specifically acute care; legal, health, or background requirements (16%); and the requirements of training or orientation were too time
Conclusion: Pre-admission clinical contact hours are beneficial for students entering physical therapy. Academic faculty members acknowledged difficulties in scheduling contact hours but expressed the students had much to gain from the experience. Faculty recognize that students appreciate a PT that is a mentor as well as a quality practitioner. Future analyses will compare these results with two other studies to determine if there is a correlation between faculty, student, and clinician perspectives of preadmission clinical contact hours.
CHAPTER I

Background and Purpose

Physical therapy is becoming an increasingly popular profession with projections of a 28 percent growth from 2016 to 2026.\textsuperscript{1} This is due to the increase in average age of the population with all of the related health risk factors that accompany aging.\textsuperscript{2} In connection to this increasing interest in the profession comes a need to effectively and efficiently screen students prior to admittance into a Doctor of Physical Therapy (DPT) program. To date, programs focus on a variety of categories consisting of Graduate Record Examination (GRE) scores, grade point average (GPA), professional letters of recommendation, personal interviews, and various hours including contact hours, volunteer hours, work hours, or other hours deemed fit.

Application Process

Physical Therapy Centralized Application Service (PTCAS) is a service that a majority of physical therapy programs use for application purposes. PTCAS allows students to apply at multiple schools with one generalized application and compare difference application requirements that vary by institution. Of the 243 accredited physical therapy programs in the United States, 221 (91\%) participate in PTCAS online services.\textsuperscript{3} In the 2016-2017 cycle, there were over 19,000 applicants in the PTCAS system, with 118,620 applications send to participating institutions.\textsuperscript{3} With 214 participating programs a total of 9,707 seats are available for admission. These numbers mean the overall acceptance rate is right around 50\%, implying the review process is quite rigorous. It is also important to note that each individual program has
their own predictive measures on student success and criteria to choose the best possible applicants to both pass the licensure exam and complete the program.

Application Components

Grade point average is the most researched portion of the application and there is compelling evidence as to why. In a 2001 study completed by Dockter, a correlation was determined between core course GPA along with GPA of the first semester in the PT program with NPTE pass rates. Dockter notes the strongest independent factor in predicting pass rates of the NPTE was GPA following the first semester, but the next strongest predictor was admittance GPA of core classes. First semester GPA was also predicted effectively by admittance GPA. Combining the results of these two studies, we can make a connection between undergraduate GPA, first semester GPA, and finally NPTE pass rate. Attention has been directed towards GRE scores to assess the ability to predict success. There is no standardized entrance examination for physical therapy programs so programs elect to utilize the GRE. Utzman et al determined verbal GRE scores were the most predictive independently for failure of the NPTE. This was compared to quantitative GRE scores and undergraduate GPA along with failure rates, both of which showed weak, but significant predictability of academic difficulty. This data was then compared with demographic data to develop correlations for NPTE pass rate. Connections were established that link GRE scores and undergrad GPA to increased pass rate of the NPTE.

Many programs do not require a degree prior to admittance which has led schools to develop accelerated programs, resulting in students being accepted into PT programs at a younger age. To the best of our knowledge, there has not been research completed to assess NPTE pass rate dependent on age. Letters of recommendation have minimal research into their effectiveness, but we predict contact hours are a means to building connections for obtaining a
letter of recommendation. The professional essay component is designed to learn more about the individual, but with proven verbal GRE score predictability we can infer a correlation to overall writing ability of the student.\(^7\)

Interviews are another aspect of the application process that differs between professional programs. Due to the lack of subjectivity of interviews leading to difficulty with research, not many correlations have been determined between interviewing ability and admissions. In a study of occupational therapy interviews Thomas et al\(^8\) determined multiple mini interviews (MMIs) were able to effectively screen for specific attributes. The interviewers, as well as the interviewees, approved this method, as each MMI looked at a specific aspect of the applicant based on their responses. This research was based on data collected in a similar study completed by Razack et al\(^9\) to assess MMIs for medical school applicants. This research yielded results of applicants reporting they were able to portray their strengths more efficiently during the interview as compared to a conventional interview. The interviewers also stated they were able to better detect certain aspects of applicants’ character when they were looking for the prevalence of a specific trait. This is a growing trend in interview processes across the country with many programs utilizing this technique, but it is not yet proven in physical therapy specifically. Most aspects of the application process are proven to be vital components of predicting success but information on clinical contact hours is miniscule.

**Contact Hours**

As of 2016-2017, 186 of the 221 programs that utilize PTCAS software require observation hours from their applicants. To this day, there remains limited research on the effectiveness of requiring contact hours for students applying to physical therapy programs, as well as faculty and clinical instructor viewpoints on their effectiveness at predicting academic
success. However, there are many benefits for prospective students to complete contact hours prior to postgraduate education. It allows students to begin building their professional identity, along with networking with professionals within their field of interest. Observation also allows for students to grasp the large scope of subspecialties within the physical therapy realm and fosters interest in certain areas. A study conducted by Gleeson\textsuperscript{10} in 2003 found that observation hours contributed to the individual's decision to apply to physical therapy school. The students ranked exposure to the profession as the most important implication of the volunteer hours. With the increasing demand on physical therapists in the healthcare field, it is becoming harder for students to complete the required volunteer hours that programs desire. Students often have to go through a rigorous application process if they wish to observe in a hospital setting that includes: training in Health Insurance Portability and Accountability Act (HIPAA), background checks, tuberculosis (TB) testing, along with additional paperwork. Another study by Wang\textsuperscript{11} identified the effects of a premedical mentorship program on undergraduate students pursuing a career as a physician. This study found significant increases in knowledge about the profession, but no differences in willingness to pursue a career as a physician. A similar study by Kaye\textsuperscript{12} looked at the effects of a Mini Medical school program that was implemented to high school students to identify attitudes towards pursuing a career in medicine. They found that students who participated in the program were more inclined to pursue a career in osteopathic medicine than those who did not, and students felt they had a better understanding of the profession afterwards, along with getting an idea of what medical school consists of.

There are various problems that arise when requiring pre-admission contact hours within physical therapy. As stated previously, there were over 19,000 applicants in the 2016-2017 PTCAS cycle.\textsuperscript{3} This high volume of applicants puts strain on practicing clinicians to be able to
accept students for contact hours and the competition is quite rigorous. Furthermore, observing in acute or inpatient settings requires extensive paperwork and hurdles before one can even begin with a medical facility. This can make the waitlist for observation opportunities grow even larger and completing contact hours more difficult. Accepting students to observe often times requires a large time burden on therapists and may hinder their clinical efficiency. Furthermore, the role of networking plays an important role in accessing contact hours by knowing someone within the system that can help facilitate the process.

**Keys to contact hour success**

There are a multitude of opportunities for job shadowing in educational institutions, career centers, and businesses. The promotions are mainly for high school students, college students, and employed individuals who are seeking a career, new opportunities or moving within their current employment. According to Manchester Metropolitan University,¹³ job shadowing has numerous benefits to both the host and the guest. The host is allowed to develop their coaching/mentoring skills while the clinic gets to reflect and review on their practices following. While the guest gets to understand the inner workings of the profession and why things work the way they do.¹³ Recommendations from Monster Career Advice¹⁴ suggest that sites that are hosting contact hours be prepared and schedule out the day, have conversations with students, and giving the student information to take home can all make the observational experience more beneficial for both sides.
CHAPTER 2
METHODS

This study was part three of a three-part study looking into the usefulness of pre-admission clinical contact hours. This portion focused on the perception of faculty in PT programs. While the previous parts focused on the perspectives of students and clinicians, respectively. This study was a cross-sectional analysis that utilizes an electronic survey tool. This research has been approved by the University of North Dakota’s Institutional Review Board, IRB-201606-415. IRB documents are included in Appendix A.

Participants
An email was sent to the chairpersons or directors of clinical education (DCEs) of all accredited physical therapy programs within the United States; the email invited participation in the study and provided a link to the Qualtrics survey. Chairs and DCEs were asked to distribute the surveys to core faculty members within their programs. Three follow-up emails were sent to the chairs and directors, and thus faculty members, thanking them for their participation and encouraging non-responders to complete the survey.

Survey Design
The research survey, similar to those sent to students and clinicians in earlier studies, was tailored to faculty members. The survey addressed faculty members’ perceptions as to the usefulness of pre-admission clinical contact hours, their students’ experiences with contact hours, and demographic information of the respondent. The second section of the survey asked for demographic information about the program, such as: requirements for contact hours and the
population of the community and state in which the program is located. Single-answer multiple choice, multiple-answer multiple choice, Likert scale, and open-ended narrative responses were elicited. A copy of the survey is included in Appendix B.

**Data Analysis**

Qualtrics survey software\textsuperscript{31} was used to gather the data which was then downloaded into IBM SPSS Statistics 24 software for analysis. Categorical data was recoded based upon frequency of responses. Specifically, ‘state in which your program is located’ was recoded into U.S. Census bureau categories of four regions. Population categories were collapsed from seven to five: Less than 50,000; 50,000-99,999; 100,000-249,000; 250,000-999,999; and greater than or equal to 1,000,000. Likert scale response, originally use a 7-point scale for increased variance (Strongly Disagree, Disagree, Slightly Disagree, Neutral, Slightly Agree, Agree, Strongly Agree) were recoded into three categories (Disagree, Neutral, Agree) for reporting of frequencies and percentages.

Two types of statistical analyses were run. Traditional descriptive statistics were used for frequencies, percentages, measures of central tendency and measures of variability. Inferential statistical tests, parametric and non-parametric, were used as appropriate to identify differences between groups. For example, K-W ANOVA was used to analyze differences in ‘usefulness’ ratings between respondents from different size communities or between geographical regions. For all inferential statistical tests, $\alpha=.05$ was to identify significant differences.

Narrative responses were coded by researchers and categorized based on similar recurring narratives. The original categories were then reviewed for further interpretations. For
example, for the question “What makes for quality clinical contact hours?” the original category of ‘interactions’ was parsed into themes of ‘interactions with the PT’ and ‘interactions with a patient.’
CHAPTER 3

RESULTS AND DISCUSSION

The data collected is divided into categories beginning with demographics and progressing through the survey questions. Charts begin each new data set, followed by discussion on the information given in the chart.

Demographics

Surveys were returned from 188 faculty members. The majority of responses were from females; 60% were from core faculty members. Nearly 80% of respondents graduated between 1980 and 1989. See Table 1.

Table 1. Respondent Demographic Data: Frequencies and Percentages

<table>
<thead>
<tr>
<th>Respondent Demographics*</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (n=177)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>134</td>
<td>76</td>
</tr>
<tr>
<td>Male</td>
<td>43</td>
<td>24</td>
</tr>
<tr>
<td>Role (n=178)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Faculty Member</td>
<td>106</td>
<td>60</td>
</tr>
<tr>
<td>Director of Clinical Education</td>
<td>60</td>
<td>34</td>
</tr>
<tr>
<td>Chair of the Department</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Year of Graduation, Entry-Level Degree (n=178)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1970 - 1979</td>
<td>31</td>
<td>18</td>
</tr>
<tr>
<td>1980 - 1989</td>
<td>49</td>
<td>28</td>
</tr>
<tr>
<td>1990 - 1999</td>
<td>46</td>
<td>26</td>
</tr>
<tr>
<td>2000 - 2009</td>
<td>43</td>
<td>24</td>
</tr>
<tr>
<td>2010 - present</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

* Not all respondents answered each item
Faculty members from 31 states responded, with the largest percentages submitted from the Midwest and South geographical regions. Most respondents (30%) work in communities of 250,000 to 1 million people.

Table 2. Program Demographic Data of the Respondents: Frequencies and Percentages

<table>
<thead>
<tr>
<th>Program Demographics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region in Which the Respondents’ Program is Located (n=177)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast (ME, NH, VT, MA, RI, CT, NY, NJ, PA)</td>
<td>29</td>
<td>16</td>
</tr>
<tr>
<td>South (DE, MD, DC, VA, WV, NC, SC, GA, FL, KY, TN, AL, MS, AR, LA, OK, TX)</td>
<td>62</td>
<td>35</td>
</tr>
<tr>
<td>Midwest (OH, IN, IL, MI, WI, MN, IA, MO, ND, SD, NE, KS)</td>
<td>66</td>
<td>37</td>
</tr>
<tr>
<td>West (MT, ID, WY, CO, NM, AZ, UT, NV, WA, OR, CA, AK, HI)</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>Population of the Community in which the Respondents’ Program Is Located (n=176)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤49,999</td>
<td>26</td>
<td>15</td>
</tr>
<tr>
<td>50,000 - 99,999</td>
<td>34</td>
<td>19</td>
</tr>
<tr>
<td>100,000 - 249,999</td>
<td>34</td>
<td>19</td>
</tr>
<tr>
<td>250,000-999,999</td>
<td>52</td>
<td>30</td>
</tr>
<tr>
<td>≥1,000,000</td>
<td>30</td>
<td>17</td>
</tr>
</tbody>
</table>

* Not all respondents answered each item

All regions and population categories of the US were adequately represented. The graduation dates are similar to the demographics last listed on APTA expect for the 00s and 10s as younger therapists are growing in relative size due to an increase in DPT programs. We predict most new physical therapists do not enter into teaching until gaining experience, which would account for the decreased response percentage from recent graduated professionals. Eleven respondents did not fill out any of the demographic questions, most likely for more
anonymity. Responses were received from 60 DCEs, representing almost 25% of the programs nationwide, though surveys may have been forwarded by DCEs but not filled out.

**Contact Hours: Requirements, Purposes, Difficulties, and Benefits**

The majority of faculty members (86%) indicated their program requires pre-admission clinical contact hours and 76% state they require verification of those hours. The number of contact hours required was variable; of those who reported hours (n=157), 38% require 51-100 hours and 30% require 50 or fewer hours. Only 70 respondents indicated their program has requirements for a variety of settings or for the number of hours required within a setting. The primary purpose of contact hours, from the faculty member’s perspective, was that the student become familiar with the practice of physical therapy. See Table 3.

**Table 3. Contact Hour Requirements and Purposes: Frequencies and Percentages**

<table>
<thead>
<tr>
<th>Requirement:</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contact Hours are Required by the Program (n = 188)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>161</td>
<td>86</td>
</tr>
<tr>
<td>No</td>
<td>27</td>
<td>14</td>
</tr>
<tr>
<td><strong>Variety of Settings or Hours per Setting are Required (n=157)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>70</td>
<td>45</td>
</tr>
<tr>
<td>No</td>
<td>87</td>
<td>55</td>
</tr>
<tr>
<td><strong>The Programs’ Primary Purposes for Requiring Contact Hours (n=188, multiple-answers possible)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Become familiar with the practice of physical therapy</td>
<td>156</td>
<td>83</td>
</tr>
<tr>
<td>Receive a letter of recommendation from a PT</td>
<td>42</td>
<td>22</td>
</tr>
<tr>
<td>Be better prepared for the interview</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td>Experience early networking</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>Reassurance of PT as a profession*</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Exposure to PT*</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

* From narrative responses
Nearly half of responding faculty (73 of 156, 47%) stated their students reported difficulty when seeking contact hours. The primary difficulties, with more than 20% of respondents selecting a specific item from the multiple-choice question, included site access, site busyness, and difficulties with accessing a specific site. Thirty narrative responses identified the acute care or hospital settings as difficult to access. See Table 4.

Table 4. Difficulties in Obtaining Contact Hours: Frequencies and Percentages

<table>
<thead>
<tr>
<th>Reported Difficulty</th>
<th>n*</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site does not take students</td>
<td>52</td>
<td>28</td>
</tr>
<tr>
<td>Accessing specific setting type</td>
<td>52</td>
<td>28</td>
</tr>
<tr>
<td>Site was too busy</td>
<td>42</td>
<td>22</td>
</tr>
<tr>
<td>Legal, health or background requirements</td>
<td>34</td>
<td>18</td>
</tr>
<tr>
<td>Requirements of training and/or orientation were too time consuming</td>
<td>29</td>
<td>15</td>
</tr>
<tr>
<td>Scheduling conflicts with the site</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>Difficulty of travel to facility or distance was too far</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Lack of or poor communication with site/volunteer coordinator</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Facility seemed unprepared to offer pre-professional contact hours</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Scheduling conflicts with the PT</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

* Each respondent could check more than one item.

Non-parametric Chi-Square analyses were used to determine if difficulties in obtaining hours were similar between regions of the country: northeast, south, Midwest, and west. Four analyses were possible when assumptions of Chi-Square were considered. There were no significant differences between regions for any of the four analyses. See Table 5.

Table 5. Chi-Square Tests for Difficulties in Obtaining Contact Hours between Regions of the Country

<table>
<thead>
<tr>
<th>Reported Difficulty</th>
<th>Chi-Square</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site does not accept students</td>
<td>2.297</td>
<td>3</td>
<td>.513</td>
</tr>
<tr>
<td>Accessing specific settings</td>
<td>1.277</td>
<td>3</td>
<td>.735</td>
</tr>
<tr>
<td>Site was too busy</td>
<td>1.135</td>
<td>3</td>
<td>.769</td>
</tr>
<tr>
<td>Legal, health or background requirements</td>
<td>5.013</td>
<td>3</td>
<td>.171</td>
</tr>
</tbody>
</table>
Contact hours were required by 3/4th of the respondents indicating they are beneficial for selecting students. About half of the responses stated they require a variety of settings while the other half stated they did not, indicating the main goal is to have the student see the profession and get an introduction to physical therapy. The responses indicated that the main goal of most programs requiring hours is for the student to become familiar with physical therapy. Familiarity would be best portrayed during the interview process, but interestingly being prepared for an interview was a much less desired response (13%). Researchers predict this implies programs are more concerned that the student is learning and making the right decision rather than being prepared for the admission process.

The statistics for difficulties in obtaining contact hours show that the majority of faculty do not feel their students had difficulty. The difficulties reported most had to do with specifics at sites, like a site not taking students or being too busy. Researchers found no difference in the responses based on the region of the country.

Faculty’s Perspectives of Pre-Professional Clinical Contact Hours

Each respondent was asked to rate their personal level of agreement or disagreement with series of Likert Statements as to the usefulness of pre-admission clinical contact hours. The Likert scale used a 7-point scale to enable an increased variability in responses. Ninety-one percent of respondents agree that contact hours are beneficial to students with a calculated mean rating of 5.86 ± 1.27 on a 7-point scale; the median rating was 6.00. Ninety-three percent agree that contact hours help students decide on physical therapy as a career with a mean rating of 6.01 ± 1.13 on the same 7-point scale; the median rating was 6.00. Only 28% of respondents believe
contact hours help a student decide to apply to a particular PT program; the mean rating for this is $3.57 \pm 1.42$; the mean rating is considered as 'neutral' and the median rating was 4.00, also a 'neutral' number. See Table 6.
Table 6. Faculty Members’ Perspectives of Contact Hours: Means and Standard Deviations

<table>
<thead>
<tr>
<th>Contact hours are beneficial to students.</th>
<th>n</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Contact hours are beneficial to students.</td>
<td>182</td>
<td>11</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

Contact hours help students:

<table>
<thead>
<tr>
<th>in deciding on physical therapy as a career.</th>
<th>n</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>to decide to apply to a particular physical therapy program.</td>
<td>180</td>
<td>79</td>
<td>44</td>
<td>51</td>
</tr>
<tr>
<td>decide on a specific patient/client population with which to work.</td>
<td>181</td>
<td>66</td>
<td>36</td>
<td>45</td>
</tr>
<tr>
<td>decide on a specific setting in which they would like to work.</td>
<td>181</td>
<td>69</td>
<td>38</td>
<td>41</td>
</tr>
<tr>
<td>to perform well within the professional physical therapy program.</td>
<td>181</td>
<td>86</td>
<td>48</td>
<td>40</td>
</tr>
<tr>
<td>to perform well within clinical experiences and/or internships.</td>
<td>181</td>
<td>83</td>
<td>46</td>
<td>44</td>
</tr>
<tr>
<td>with their communication skills with patients/clients.</td>
<td>179</td>
<td>51</td>
<td>28</td>
<td>46</td>
</tr>
</tbody>
</table>

a Disagree: Strongly Disagree; Disagree; Somewhat Disagree Responses.
Neutral: Neutral. And Agree: Somewhat Agree; Agree; Strongly Agree Responses
b Calculations using the original 7-point Likert Scale.
The non-parametric Kruskal-Wallis statistical test determined perceptions were similar for the four regions of the country. See Table 7. Similarly, the non-parametric Kruskal-Wallis statistical test determined perceptions were similar between differing population categories. See Table 8. Frequencies and percentages, means and standard deviations for all respondents were reported previously in Table 6.

Table 7. Faculty Members’ Perspectives of Contact Hours*:
K-W ANOVA Comparing Perceptions between Regions of the Country

<table>
<thead>
<tr>
<th>Perception</th>
<th>n</th>
<th>H</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact hours are beneficial to students.</td>
<td>182</td>
<td>1.621</td>
<td>3</td>
<td>.655</td>
</tr>
<tr>
<td>Contact hours help students:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>decide on physical therapy as a career.</td>
<td>181</td>
<td>1.975</td>
<td>3</td>
<td>.578</td>
</tr>
<tr>
<td>decide to apply to a particular physical therapy program.</td>
<td>180</td>
<td>3.215</td>
<td>3</td>
<td>.360</td>
</tr>
<tr>
<td>decide on a specific patient/client population with which to work.</td>
<td>181</td>
<td>.813</td>
<td>3</td>
<td>.846</td>
</tr>
<tr>
<td>decide on a specific setting in which they would like to work.</td>
<td>181</td>
<td>.972</td>
<td>3</td>
<td>.808</td>
</tr>
<tr>
<td>perform well within the professional physical therapy program.</td>
<td>181</td>
<td>1.991</td>
<td>3</td>
<td>.574</td>
</tr>
<tr>
<td>perform well within clinical experiences and/or internships.</td>
<td>181</td>
<td>7.242</td>
<td>3</td>
<td>.065</td>
</tr>
<tr>
<td>with their communication skills with patients/clients.</td>
<td>179</td>
<td>3.623</td>
<td>3</td>
<td>.305</td>
</tr>
</tbody>
</table>

* Using 7-point Likert Scale
Table 8. Faculty Members’ Perspectives of Contact Hours*:
K-W ANOVA Results Comparing Perceptions between Population Categories

<table>
<thead>
<tr>
<th>Contact hours are beneficial to students.</th>
<th>n</th>
<th>H</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact hours help students:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>decide on physical therapy as a career.</td>
<td>181</td>
<td>1.195</td>
<td>4</td>
<td>.879</td>
</tr>
<tr>
<td>decide to apply to a particular physical therapy program.</td>
<td>180</td>
<td>3.139</td>
<td>4</td>
<td>.535</td>
</tr>
<tr>
<td>decide on a specific patient/client population with which to work.</td>
<td>181</td>
<td>2.743</td>
<td>4</td>
<td>.602</td>
</tr>
<tr>
<td>decide on a specific setting in which they would like to work.</td>
<td>181</td>
<td>9.107</td>
<td>4</td>
<td>.058</td>
</tr>
<tr>
<td>perform well within the professional physical therapy program.</td>
<td>181</td>
<td>3.427</td>
<td>4</td>
<td>.489</td>
</tr>
<tr>
<td>perform well within clinical experiences and/or internships.</td>
<td>181</td>
<td>4.609</td>
<td>4</td>
<td>.330</td>
</tr>
<tr>
<td>with their communication skills with patients/clients.</td>
<td>179</td>
<td>1.047</td>
<td>4</td>
<td>.903</td>
</tr>
</tbody>
</table>

* Using 7-point Likert Scale

This data shows the importance of pre-admission clinical contact hours to physical therapy programs in the US. The perspective of faculty is consistent at 91% stating that physical therapy is beneficial to students. Tables 7 and 8 show how the responses compare in regard to the regions and populations of the respondents and there is no significant difference in any of the categories.

There are many perceived benefits to contact hours, with the most common response being they help students decide on physical therapy as a career (93%). This response was also written in several times on a previous question in the survey, indicating faculty believe this is a very important part of contact hours. Improvement of communication skills received a high response rate in two sections of this research, indicating this trait is important for students.
Determinants of Quality Contact Hours

Faculty members were asked to identify, from their perspective, one to three items which made for a quality pre-admission clinical contact hour experience. Four main categories emerged: exposure/time with patient; understanding of the profession; communication and professionalism; and interaction/education with the PT/mentor. Nearly half, 168 of 350 responses, had to do with the student gaining exposure to and time with a patient. Understanding the profession comprised 38% of the responses. See Figure 1.

Figure 1. Determinants of a quality contact hour experience

Examples of responses four each category are as follows:

Exposure/time with patient

“Exposure to variety of socioeconomic and cultural backgrounds of patients.”

“Observation of patient care”
Understanding profession

"Opportunity to interact with health care providers and learn from their experiences about the job of a PT"

"Observing the emotional rewards of PT practice"

Communication and Professionalism

"Professional interactions with health providers"

"Able to see personality traits important to a physical therapist being successful"

Interaction/education with PT/Mentor

"A mentor who takes time to discuss the profession and some of the pros and cons of the individual setting."

"ability to ask questions when present"

The original four categories were re-analyzed to further understand the determinants of quality contact hours. Exposure/time with a patient was sorted to the setting (n=54, 29%), diagnoses (n=65, 34%), interactions (n=37, 20%), and billing/documentation (n=33, 17%). Most of the responses had to do with the students seeing a wide variety of patients, either from differing settings or representing differing diagnoses.

Figure 2: Exposure/Time with Patient

![Figure 2: Exposure/Time with Patient]

Figure 2. Exposure/time with patient
The original category of ‘education/interaction with a PT/mentor’ demonstrated responses related to the individual most responsible for education/interaction(s) during contact hours: the PT, the student, or both. The responses overwhelmingly indicated the PT was the responsible party. See Figure 3.

Figure 3. Percent of individual(s) most responsible for students’ interaction/education with a PT/mentor.

The open-ended responses provided by faculty members related back to many previous categories in the survey. The highest occurring response had to do with exposure to patients. Throughout the study, patient care and communication skills with patients recurred often. This portion of the survey once again shows faculty believe it is important for students to see patients and build clinical skills prior to admission. Early in the survey around half the faculty stated their program required a variety of settings, but in this question many faculty members stated it is beneficial for students to see a variety of patients in different settings with different diagnoses. Even though programs might not require a variety of settings, the faculty acknowledge the importance of exposure as a tool for learning.

The next highest recurring response had to do with interaction with the physical therapist. Researchers determined that the majority of these responses indicated that engaging the student in the contact hours was the responsibility of the physical therapist. It is not enough for PTs to
just volunteer to have a student present, they also need to be willing to reach out to the student and help them grow and learn about the profession.

Limitations

We acknowledge several limitations in regards to this research. The narrative data was categorized by researchers rather than external reviewers, allowing for certain biases to be unavoidable. The responses to narrative questions were coded by researchers and it was up the researcher to categorize the data. Different members of the research team reviewed and approved of the categorization.

Since the surveys were sent to DCEs and then forwarded to faculty, it was possible for the email thread was lost before reaching the potential respondents. This also means the data represented certain programs more, if their faculty had a higher response rate as compared to other programs. However, as noted previously, respondents were asked to provide their personal perceptions rather than their programs’ preferences.

We also did not have the respondents fill in the organization they are a part of, because we were looking for individual opinions, not that a program acknowledges/represents. Finally, some survey questions were left blank which lead to a different response rates for many of the questions and a change in representation of certain questions.

Future Research

As physical therapy continues to be an expanding field, further research needs to be completed to establish recommended numerical values for contact hours. It was established here that contact hours are beneficial, but we do not yet know how many or how they should be completed. Researchers need to continue to find the best indicators of success in the field of physical therapy.
Conclusion

This study shows that faculty members across the country perceive pre-professional clinical contact hours as beneficial. Contact hours help students decide on physical therapy as their career of choice and they grow as professionals in the process. Contact hours are most beneficial when the physical therapist fosters an interactive learning environment for the student. In research looking into all STEM professions, students reported having a positive experience that inspired them to pursue the career they did.\textsuperscript{16} The highest achieving students reported having an inspiration in their life within the field of study.\textsuperscript{16} The environment should afford exposure to patients with different diagnoses and in different settings, while allowing the student to communicate with the patient. This assists them in building professional skills, enhancing communication, and solidifying their career path. It is important to welcome students into the clinical setting early, as they tend to adhere to their career choice throughout school.\textsuperscript{17} Based on the results of this research and the findings of other studies, contact hours are beneficial for students as they pursue education in the growing field of physical therapy.
REFERENCES


The Protocol Change Form and all included documentation for the above-referenced project have been reviewed and approved via the procedures of the University of North Dakota Institutional Review Board.

You have approval for this project through the above-listed expiration date. When this research is completed, please submit a termination form to the IRB.

The forms to assist you in filing your project termination, adverse event/unanticipated problem, protocol change, etc. may be accessed on the IRB website: http://und.edu/research/resources/human-subjects/

Sincerely,

Michelle L. Bowles, M.P.A., CIP
IRB Manager

***Please note new office location***

Michelle L. Bowles, M.P.A., CIP
Manager, Institutional Review Board
University of North Dakota

Tech Accelerator, Suite 2050
4201 James Ray Drive Stop 7134
Grand Forks, ND 58202-7134

P: 701.777.4279
PROTOCOL CHANGE FORM

UNIVERSITY OF NORTH DAKOTA INSTITUTIONAL REVIEW BOARD

Please complete this form and attach revised research documents for any proposed change to your protocol, consent forms, or any supportive materials (such as advertisements, questionnaires, surveys, etc.). All changes must be highlighted. Any proposed change in protocol affecting human participants must be reviewed and approved by the IRB prior to implementation, except where an immediate change is necessary to eliminate a hazard to the participant.

Principal Investigator: Renee Mabey, PT, PhD; Cindy Flom-Meland, PT, PhD, NCS

Telephone: 701-777-4854 E-mail Address: renee.mabey@ndus.edu (OLD is @med.und.edu)

Complete Mailing Address: UND SMHS Room E349
.1301 N Columbia Road Stop 9037
Grand Forks, ND 58202-9037

School/College: School of Medicine & Health Sciences Department: Physical Therapy

Project Title: Accessibility and Perceived Value of Pre-Admission Clinical Contact Hours: The Physical Therapy Faculty

Proposal Number: IRB—201606-415 Approval Date: 6/22/2016

THE CURRENT STATUS OF THE PROJECT IS (Check one)

Project currently in progress. Number of subjects enrolled is:

Project not yet started. No subjects enrolled.

x Project closed to subject entry.

1. Briefly describe and explain the reason for the revision or amendment and the justification for the change. Include a copy of affected protocol pages and consent form with specific changes highlighted.

Graduate Students will be assisting with the data analysis. The students will also be using portions of the analyses for their Scholarly Projects; Scholarly Projects are requirements for graduation and the Doctor of Physical Therapy degree.

Students to be added to the protocol: Andrew Nelson and Riley Wilson

2. Does the change affect the study or subject participation (procedures, risks, costs, etc.)?  Yes  x  No

Please explain:

3. Does the change affect the consent document?  Yes  x  No

If yes, include the revised consent form(s) with the changes highlighted, and a clean copy of the revised consent form(s).

By signing below, you are verifying that the information provided in the Human Subjects Review Form and attached information is accurate and that the project will be completed as indicated.

Signatures:

Renee Mabey  10/19/2018  Cindy Flom-Meland  10-22-18

Principal Investigator

Student Adviser (if applicable)

Date:

Revised 5/1/06
### UNIVERSITY OF NORTH DAKOTA
INSTITUTIONAL REVIEW BOARD
KEY PERSONNEL LISTING

<table>
<thead>
<tr>
<th>Names of Research Personnel</th>
<th>Position (select from drop-down menu)</th>
<th>Highest Academic Degree (High School, B.S., M.A., Ph.D., M.D., etc.)</th>
<th>Involvement (check all that apply)</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Nelson</td>
<td>Graduate student</td>
<td>B.S., Kinesiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiley Wilson</td>
<td>Graduate student</td>
<td>B.S., Exercise Science</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Attach proof of education in human subjects research for all non-UND personnel

(Revised 03/15/2017)
June 22, 2016

<table>
<thead>
<tr>
<th>Principal Investigator(s):</th>
<th>Renee Mabey, PT, PhD; Cindy Flom-Meland, PT, PhD, NCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Title:</td>
<td>Accessibility and Perceived Value of Pre-Admission Clinical Contact Hours: Physical Therapy Faculty Perspective</td>
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<tr>
<td>IRB Project Number:</td>
<td>IRB-201606-415</td>
</tr>
<tr>
<td>Project Review Level:</td>
<td>Exempt 2</td>
</tr>
<tr>
<td>Date of IRB Approval:</td>
<td>06/22/2016</td>
</tr>
<tr>
<td>Expiration Date of This Approval:</td>
<td>06/21/2019</td>
</tr>
</tbody>
</table>

The application form and all included documentation for the above-referenced project have been reviewed and approved via the procedures of the University of North Dakota Institutional Review Board.

If you need to make changes to your research, you must submit a Protocol Change Request Form to the IRB for approval. No changes to approved research may take place without prior IRB approval.

This project has been approved for 3 years, as permitted by UND IRB policies for exempt research. You have approval for this project through the above-listed expiration date. When this research is completed, please submit a Termination Form to the IRB.

The forms to assist you in filing your project termination, adverse event/unanticipated problem, protocol change, etc. may be accessed on the IRB website: http://und.edu/research/resources/human-subjects/

Sincerely,

Michelle L. Bowles, M.P.A., CIP
IRB Coordinator
mlb/sb

Cc: Chair, Physical Therapy
University of North Dakota Exempt Certification Form – JANUARY 2015 VERSION  
Research Involving the Use of Survey, Interview, Observational Procedures or Educational Tests

Complete this form if you are requesting permission to use survey, interview, or observational procedures, or educational tests.

All research with human participants conducted by faculty, staff, and students associated with the University of North Dakota, must be reviewed and approved as prescribed by the University’s policies and procedures governing the use of human subjects. No activities are to be initiated without prior review and approval by the Institutional Review Board.

Please answer the following questions regarding your research. Handwritten forms are not accepted – responses must be typed.

1. Are prisoners included in the research? □ Yes □ No
   If you answered “Yes” to the above question, this research does not qualify as exempt. Please fill out and submit a “Human Subjects Review Form”. If you answered “No”, continue to question 2a.

2a. Are children included in the research? □ Yes □ No
   If you answered “No” to the above question, please skip question 2b and continue to question 3. If you answered “Yes”, continue to question 2b.

   2b. Does the research include survey or interview procedures? Does the research involve the observation of public behavior with researcher interaction with the subjects? □ Yes □ No
      If you answered “Yes” to questions 2a and 2b, this research does not qualify as exempt. Please fill out and submit a “Human Subjects Review Form”. If you answered “No”, continue to question 3.

3a. Will the data be documented in such a manner that subjects cannot be identified, either directly or through identifiers linked to the subjects (subject name, social security number, birth date, coding, etc.)? □ Yes □ No
    If you answered “Yes” to the above question, please skip question 3b and continue with the rest of the form. If you answered “No”, continue to question 3b.

   3b. Will the disclosure of the subjects’ responses outside of the research reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects’ financial standing, employability, or reputation? □ Yes □ No
       If you answered “Yes” to the above question, this research does not qualify as exempt. Please fill out and submit a “Human Subjects Review Form”.

4. Will the research involve the use of audio, video, digital or image recordings of subjects? □ Yes □ No
   If you answered “Yes” to the above question, this research does not qualify as exempt. Please fill out and submit a “Human Subjects Review Form”. If you answered “No”, provide the information requested below:

Principal Investigator: Renee Mabey, PT, PhD Cindy Flom-Meland, PT, PhD, NCS

Telephone: 701-777-2831 for either 
E-mail Address: renee.mabey@med.und.edu cindy.flom.meland@med.und.edu

Complete Mailing Address: 501 N Columbia Road, Stop 9037 Grand Forks, ND 58202

School/College: University of North Dakota Department: Physical Therapy

Student Advisor (if applicable):

Telephone: 
E-mail Address:

Address or Box #: 

School/College: 
Department:

*** All IRB applications must include a Key Personnel Listing

Project Title: Accessibility and Perceived Value of Pre-Admission Clinical Contact Hours: Physical Therapy Faculty Perspective
Proposed Research Beginning Date: June 2016

Exempt research will be approved for 3 years from the original approval date.

Funding agencies supporting this research: none

(A copy of the funding proposal for each agency identified above MUST be attached to this proposal when submitted.)

Does any researcher associated with this project have a financial interest in the results of this project? If yes, submit on a separate piece of paper an additional explanation of the financial interest. The Principal Investigator and any researcher associated with this project should have a Financial Interests Disclosure Document on file with their department.

☐ YES or ☒ NO

Will any research participants be obtained from another organization outside the University of North Dakota (e.g., hospitals, schools, public agencies, American Indian tribes/reservations)?

☐ YES or ☒ NO

Will any data be collected at or obtained from another organization outside the University of North Dakota?

If yes to either of the previous two questions, list all institutions:

Letters from each organization must accompany this proposal. Each letter must illustrate that the organization understands its involvement and agrees to participate in the study. Letters must include the name and title of the individual signing the letter and should be printed on organizational letterhead.

Does any external site where the research will be conducted have its own IRB? _____ YES or _____ NO

If yes, does the external site plan to rely on UND’s IRB for approval of this study? _____ YES or _____ NO

(If yes, contact the UND IRB at 701 777-4279 for additional requirements)

If your project has been or will be submitted to other IRBs, list those Boards below, along with the status of each proposal.

<table>
<thead>
<tr>
<th>IRB Name</th>
<th>Date submitted</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

(include the name and address of the IRB, a contact person at the IRB, and a phone number for that person)

Type of Project: Check “Yes” or “No” for each of the following.

☒ YES or ☐ NO New Project ☐ YES or ☒ NO Dissertation/Thesis/Independent Study

☐ YES or ☒ NO Continuation/Renewal ☐ YES or ☒ NO Student Research Project

Is this a Protocol Change for previously approved project? If yes, submit a signed Protocol Change Form, along with a signed copy of this form with the changes bolded or highlighted.

Please provide additional information regarding your research by responding to questions 5-11 on a separate sheet of paper.

5. In non-technical language, describe the purpose of the study and state the rationale for this research.

6. In non-technical language, describe the study procedures.

   How will subjects be informed of the research? If you will be having subjects sign a consent form, justify why. How will instrument(s) be distributed/collected? Will compensation be provided? What is the suspected duration of subject participation? Etc.

7. Where will the research be conducted?

8. Describe what data will be recorded.

9. How will data be recorded and stored (that is will it be coded, anonymous, etc.)?

   Note: Must state that data will be stored for a minimum of three years after data analysis is complete, or for a period of time sufficient to meet federal, state, and local regulations, sponsor requirements, and organizational policies and procedures.

Revised 1/9/2015 2
10. Describe procedures you will implement to protect confidentiality of data collected from participants and privacy of participants when participating in research activities.

11. Describe the nature of the subject population and the estimated number of subjects.
   If participants who are likely to be vulnerable to coercion and undue influence are to be included in the research, define provisions to protect the privacy and interests of these participants and additional safeguards implemented to protect the rights and welfare of these participants.

12. Include a copy of the study information sheet to be given to participants (either in person or online, depending on the nature of the research) that discloses research information. A template is available under ‘Exempt Certification Forms’ on the IRB Forms page of the IRB website: http://und.edu/research/resources/human-subjects/forms.cfm

Necessary attachments:
- Signed Student Consent to Release of Educational Record Form (students and medical residents only);
- Investigator Letter of Assurance of Compliance;
- Key Personnel Listing;
- Surveys, interview questions, or educational tests;
- Printed web screens (if survey is over the Internet);
- Advertisements, including recruitment emails/letters and social network postings; and
- Informed consent statement.

NOTE: The UND IRB requires that all key personnel involved in the research complete human subject education before IRB approval to conduct research can be granted.

By signing this form, I certify that the above information is accurate and that this research will be conducted in accordance with the statements provided above; this research does not involve prisoners, but if a subject becomes a prisoner, I will notify the IRB.

(Principal Investigator)  
Date: 6/10/2016

(Student Adviser)  
Date:

**All students and medical residents must list a faculty member as a student advisor on the first page of the application and must have that person sign the application.**

Submit the signed application form and any necessary attachments to the Institutional Review Board, 264 Centennial Drive Stop 7134, Grand Forks, ND 58202-7134; or bring it to Twamley Hall, Room 106.
5. In non-technical language, describe the purpose of this study and state the rationale for this research.

Title: Accessibility and Perceived Value of Pre-Admission Clinical Contact Hours: The Physical Therapy Faculty Perspective

This study is one part of a larger project which addresses: (1) accessibility of pre-professional clinical contact hours in a variety of settings and (2) the perceived value of students' pre-admission clinical contact hours from the perspective of students, clinicians, and academic faculty. This part of the study will address the accessibility and value of pre-professional clinical contact hours from the perspective of the academic faculty. The results of this study and the larger three-part study may be used to help physical therapy programs make deliberate, informed decisions regarding their admissions criteria.

Rationale: Many physical therapy programs require pre-admission clinical contact hours as part of their admission criteria. These observation, volunteer, or work hours are presumed to increase a student's knowledge of the profession—the student will be more aware of the clientele, tasks, and settings in which PTs work. The student may find the profession to be a 'good fit' with his or her career goals, skills, and personality. If the student decides to pursue PT as a career, he or she may have a preliminary understanding of how academic coursework applies to clinical practice; motivation to succeed in academics may be increased if a goal is in sight.

In contrast to the above perceptions, the discussion of faculty at an American Council of Academic Physical Therapy (ACAPT) Open Forum (Portland, Oregon, 2013) focused on the ability of pre-professional students to complete clinical contact hours. Attendees felt that access to practice settings is becoming more difficult, and with changes in health care, practitioners are too busy to interact with pre-professional students. In addition, many attendees felt that pre-admission clinical contact hours are of limited use. ACAPT was considering a national-level recommendation that completion of pre-professional contact hours not be a criterion for admission to a professional program.

A literature search found very few studies which addressed the accessibility and value of pre-professional clinical contact hours.

Literature.

In 2003, Gleeson and Utsey1 surveyed four groups of individuals: prospective physical therapy students, first year physical therapy students, Clinical Coordinators of Clinical Education (CCCEs) for physical therapy facilities in Texas, and members of the Admissions Committees of 9 physical therapy schools in Texas. Their research found that students are influenced by their experiences during observation hours, including their decisions to apply to physical therapy school.

Miller and Cioci2 conducted a survey of undergraduate students enrolled in departments of Communication Sciences and Disorders. Their findings determined that observations of a speech language pathologist have a substantial effect on students' career choices, including the patient population with which they decide to work.

In 2006, Mitchell, Dunham, and Murphy3 researched the performance of students enrolled in a dental hygiene program. Mitchell and colleagues found that a student's performance in the first year of his or her program was influenced by an understanding of the profession prior to
admission; students with a greater understanding of the profession could overcome disadvantages related to low didactic ability. Specifically, persons who are familiar with the profession have the ability to perform better in the first year of their coursework.

**Summary:**

There are few publications related to the accessibility and perceived value of pre-admission clinical contact hours in a physical therapy setting. These are the research questions: Are pre-admission clinical contact hours available? And do stakeholders (students, clinical faculty, and academic faculty) perceive the hours as useful, and if so, how are the hours useful?

A study which addressed the students' perceptions of pre-professional clinical contact hours has been initiated and preliminary analyses completed by these same UND researchers (Dr. Mabey and Dr. Flom-Meland, IRB-2015016369). The proposed study will ask academic faculty members their experiences with, and perceptions of, the accessibility and value of pre-professional clinical contact hours. A study submitted to the IRB, June 2016, will ask clinical faculty these same questions.

**References:**


6. In non-technical language, describe the study procedures.

Via an email invitation, a Qualtrics survey will be sent to the Chair or Director of Clinical Education (DCE) at every accredited physical therapy program in the United States. The Chair or DCE will be asked to forward the email and the survey link to all academic faculty associated with his or her program. Each faculty member may then choose to participate or choose to not participate; participation is voluntary. (If an academic faculty member is associated with more than one program, that individual will be instructed to complete the survey only one time.) Two or three subsequent emails will thank participants for their responses and/or serve as a reminder to complete the survey.

The survey will ask the academic faculty member the requirements and expectations of pre-professional clinical contact hours prior to admission to his or her program. The faculty member will be asked about his or her perceptions as to the purpose and value of contact hours; his or her professional profile (e.g., degrees, graduation year, rank, and position); and selected demographics of his or her program.
Participants will not receive compensation. The expected participation time within the Qualtrics survey is 10 to 15 minutes.

Data will be collected and stored via Qualtrics software; it will be downloaded, and then analyzed using SPSS software. Traditional descriptive statistics will address respondents’ demographics and their responses. Traditional analytical statistics will be used to compared differences between groups, as appropriate. Narrative responses will be coded and analyzed for themes.

As previously noted, this study is one facet of a larger research project, the data sets from students (a prior study), academic faculty (this study) and clinical faculty (a concurrent study), may be merged for analyses of differences between groups.

Survey results will be disseminated via poster and/or platform presentations, as well as a manuscript. Results may be useful to programs as they address criteria for admission. Results may be useful to clinicians as address pre-professional clinical contact hours within their facilities. The results may influence decisions of access and procedures.

7. Where will the research be conducted?

Research will be conducted through an online survey utilizing Qualtrics software. A link to the survey, supported by CILT at the University of North Dakota, will be disseminated via an email invitation. The respondent will complete the survey at his or her personal or business computer.

8. Describe what data will be recorded.

The Qualtrics survey will have two sections. Section One will ask the academic faculty member the requirements and expectations of pre-admission contact hours in his or her program. The academic faculty member will be asked about his or her perceptions as to the purposes and value of these hours. Section Two will address the respondent’s professional profile (e.g., degrees, years of experience, rank, position), and demographics of his or her program.

9. How will data be recorded and stored?

Participants will complete the online survey via Qualtrics software. Individual identifications will not be requested or recorded. No attempt will be made to locate or track the IP addresses of computers used to complete the survey.

The survey and survey data will be stored on the Qualtrics site for a minimum of 3 years after the study is completed. Copies of the survey and downloaded data will be stored on password protected computers. Only faculty and students conducting the research will have access to the survey and data.
10. **Describe procedures you will implement to protect confidentiality of data collected from participants and privacy of participant when participating in research activities.**

Completion and submission of the survey implies Informed Consent.

The survey will NOT request identifying information. The respondent will NOT be providing a name, birth date, SSN, employer ID, names of institutions, names of programs, or names of health care facilities. Computer IP addresses will not be investigated for location and owner.

All data files and statistical analyses will be stored on a password protected computer.

All results will be reported in aggregate.

11. **Describe the nature of the subject population and the estimated number of subjects.**

The survey will be distributed to the Chair or DCE of all accredited or developing physical therapy programs in the United States \( n = 259 \). The Chair or DCE will be asked to forward the survey to all core academic faculty associated with their program.

As of the American Physical Therapy Association (APTA) 2014-15 Fact Sheet (updated September 4, 2015), there were 2437 full-time core faculty positions in US programs. The number of clinical faculty is unknown.
APPENDIX B
Accessibility and Perceived Value of Pre-Admission Clinical Contact Hours: PT Faculty

This survey is currently LOCKED to prevent invalidation of collected responses! Please unlock your survey to make changes.

**Q1** Accessibility and Perceived Value of Pre-Admission Clinical Contact Hours: The Physical Therapy Faculty Perspective

You are invited to participate in a research study designed to analyze the accessibility and perceived value of observation hours prior to a student's acceptance to a professional physical therapy (PT) program. You are invited to participate as a faculty member at a professional physical therapy program.

This survey has two parts: a section with questions about accessibility and value of contact hour experience(s), and a section with demographic data collection.

Your participation in this survey is voluntary; submission of your responses is implied consent to participate. You may choose not to answer a specific question or withdraw from the survey at any time without penalty.

For more information or questions, please contact Dr. Renee Mabey at 701-777-2831 or renee.mabey@med.und.edu or Dr. Cindy Flom-Meland at 701-777-2831 or cindy.flom.meland@med.und.edu. You may also contact the University of North Dakota Institutional Review Board (IRB) at 701-777-4279 or michelle.bowles@research.UND.edu.

In this survey, "contact hours" refer to any observation, volunteer, or work experiences in which a pre-PT student is observing a licensed physical therapist prior to admittance to a professional physical therapy program. Your responses will be valuable for other professional physical therapy programs and future physical therapy students. The survey will take 5-10 minutes to complete.

Thank you,

Renee Mabey, PT, PhD and Cindy Flom-Meland, PT, PhD, NCS

**Q2** Does your program require pre-physical therapy (pre-PT) students to complete clinical contact hours prior to admission to your professional program?

- Yes
- No

Condition: No is Selected. Skip To: Based upon your personal perceptions....
Q3. You indicated your program requires pre-PT students to complete clinical contact hours. How many hours are required for admission to your professional physical therapy program?

Q10. Does your program require verification of clinical contact hours?
- Yes
- No

Q5. Does your program have specific requirements related to a variety of settings or hours per setting?
- Yes
- No

Condition: No is Selected. Skip To: What are your program's primary purposes for requiring contact hours?

Q6. How does your program define setting requirements?
- A variety of setting types are required
- A specific number of setting types are required (how many?)
- Specific setting types are required, i.e. acute, neuro, ortho, peds (please specify)
- A specific number of hours per setting are required (how many?)
- Other requirements (please specify)

Q7. What are your program's primary purposes for requiring contact hours? (Check all that apply.)
- The student will:
  - Be better prepared for the interview
  - Become familiar with the practice of physical therapy
  - Experience early professional networking
  - Receive a letter of recommendation from a PT
  - Other (please specify)

Q8. Do your students tell you of any challenges they experience in obtaining contact hours?
- Yes
- No
Q9
What challenges have students described when requesting access for contact hours? (Check all that apply.)

- Accessing specific setting type(s), i.e. acute, neuro, ortho, pediatrics (please specify)
- Scheduling conflicts with the clinic site
- Scheduling conflicts with the physical therapist
- Difficulty of travel to facility or distance was too far
- Site was too busy
- Requirements of training and/or orientation were too time consuming
- Site does not accept students for contact hours
- Legal, health, or background requirements (i.e., background check, verification of health status, HIPPA concerns, etc.)
- Lack of, or poor communication with, site/volunteer coordinator
- The facility seemed unprepared to offer pre-professional contact hours
- Other (please specify)

Q10
Does your program have specific learning goals and/or objectives for pre-PT students during clinical contact hours? (If yes, please list up to 3.)

- Yes (response 1)
- Yes (response 2)
- Yes (response 3)
- No
Based upon your personal perceptions, indicate your level of disagreement or agreement to the following statements related to pre-professional clinical contact hours.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact hours are beneficial to students</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Contact hours help students in deciding on physical therapy as a career.</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Contact hours help students to decide to apply to a particular physical therapy program.</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Contact hours help students decide on a specific patient/client population with which to work (i.e. pediatrics, geriatrics, athletic, neurologic).</td>
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<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>Contact hours help students decide on a specific setting in which they would like to work (i.e. acute care, outpatient, long term care).</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>Contact hours help students to perform well within the professional physical therapy program.</td>
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</tr>
<tr>
<td>Contact hours help students to perform well within clinical experiences and/or internships.</td>
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</tr>
<tr>
<td>Contact hours help students with their communication skills with patients/clients.</td>
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<td>0</td>
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<td>0</td>
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<tr>
<td>Other (please specify):</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
**Part 1:**

Q12 In your opinion, what makes a quality contact hour experience for pre-PT students? (Indicate up to 3 items.)

- Response 1
- Response 2
- Response 3

Q4 Does your program allow work experience within a physical therapy setting to count as contact hours?

- Yes
- No
- N/A - our program does not require contact hours

Q13 Does your program encourage pre-PT students to have any of the following experiences prior to admission to your program? (Select all that apply.)

- Certified Nursing Assistant (CNA)
- Personal Care Attendanit (PCA)
- Athletic Trainer (ATC)
- Aide / Orderly / Technician
- Camp Counselor (for individuals with medical or special needs)
- Military Medic
- Exercise Scientist
- Personal Trainer
- Physical Therapy Assistant (PTA)
- EMT / Paramedic
- Other (please specify)

Add Block

**Part 2: Demographic data**

Q14 What is your gender?

- Female
- Male
Q15 What year did you receive your entry-level PT degree?

Q16 What is your current role?
- Core Faculty
- Director of Clinical Education
- Chair of Department

Q17 In what state is your professional physical therapy program located?
- Alabama

Q18 What is the population of the city in which your professional program is located?
- Less than 50,000
- 50,000 - 99,999
- 100,000 - 249,999
- 250,000 - 999,999
- 1,000,000 - 1,999,999
- 2,000,000 - 4,999,999
- 5,000,000 or more