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Impact of Student Debt on Decisions of Terminal Clinical Education Experiences in Physical Therapist Education

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Abstract

Purpose: Student debt is of growing concern in physical therapy and other health professions in the United States. This study explored the extent to which finances and other factors influenced student decision making when applying to and selecting terminal clinical education experiences. **Methods:** An online survey was developed and distributed to 250 recent graduates of a Doctor of Physical Therapy Program (2016-19). A logistic regression model was used to determine the relationship between respondents' reported student debt and other factors when choosing a nontraditional model (the yearlong internship model (YLI)/residency model) or the traditional 4-month model. A 5-point Likert scale was used to rate the level of importance for each factor. **Results:** Seventy-six participants, across four cohorts completed the survey, representing a 30.4% response rate. The logistic regression model found that student debt did not significantly predict whether a student was likely to choose the nontraditional model over the traditional shorter terminal clinical experience; however, age and relationship status were found to be significant predictors of preference for length of experience. Based on aggregate mean data, the most important decision-making criterion in deciding the terminal clinical experience was patient population, followed by the culture of the clinic, then geographic location, and type of clinical setting. The criterion with the lowest aggregate mean was peer (within cohort) competition followed by student debt. A comparison of means found two decision-making criteria significantly reduced from the point of application to the commitment decision: saving money and interprofessional opportunities. Both decision-making criteria became less important for students when deciding on their terminal clinical experience as compared to when they were applying for the terminal clinical experience approximately 3 months earlier. **Conclusions / Recommendations:** Student debt was not an important factor in selecting the terminal clinical education experience and did not predict whether a student would apply to or select the YLI model rather than the shorter, traditional option. Instead, students considered multiple factors when selecting their terminal experience. Healthcare education programs may want to consider these factors in recruitment of clinical sites, student advising, and/or student placements related to the terminal clinical education experience.

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ABSTRACT:

Purpose: Student debt is of growing concern in physical therapy and other health professions in the United States. This study explored the extent to which finances and other factors influenced student decision making when applying to and selecting terminal clinical education experiences. **Methods:** An online survey was developed and distributed to 250 recent graduates of a Doctor of Physical Therapy Program (2016-19). A logistic regression model was used to determine the relationship between respondents' reported student debt and other factors when choosing a nontraditional model (the yearlong internship model (YLI)/residency model) or the traditional 4-month model. A 5-point Likert scale was used to rate the level of importance for each factor. **Results:** Seventy-six participants, across four cohorts completed the survey, representing a 30.4% response rate. The logistic regression model found that student debt did not significantly predict whether a student was likely to choose the nontraditional model over the traditional shorter terminal clinical experience; however, age and relationship status were found to be significant predictors of preference for length of experience. Based on aggregate mean data, the most important decision-making criterion in deciding the terminal clinical experience was patient population, followed by the culture of the clinic, then geographic location, and type of clinical setting. The criterion with the lowest aggregate mean was peer (within cohort) competition followed by student debt. A comparison of means found two decision-making criteria significantly reduced from the point of application to the commitment decision: saving money and interprofessional opportunities. Both decision-making criteria became less important for students when deciding on their terminal clinical experience as compared to when they were applying for the terminal clinical experience approximately 3 months earlier. **Conclusions / Recommendations:** Student debt was not an important factor in selecting the terminal clinical education experience and did not predict whether a student would apply to or select the YLI model rather than the shorter, traditional option. Instead, students considered multiple factors when selecting their terminal experience. Healthcare education programs may want to consider these factors in recruitment of clinical sites, student advising, and/or student placements related to the terminal clinical education experience.

Keywords: student debt, clinical education, clinical education placements

INTRODUCTION

Student debt is a growing concern impacting the physical therapy (PT) profession in the United States (US).¹⁻⁷ For physical therapists who have student loan debt, the majority comes from their PT education, with the average amount being \$116,183.¹ The American Physical Therapy Association (APTA) recently completed a survey that found only 11% of respondents had no student debt, and the average amount of debt reported by graduate physical therapists was \$152,882 (not including home-related mortgages).¹ This high debt load can cause stress and limit life choices, such as working in a preferred clinical setting, type and duration of further post-professional education, and securing additional income sources.^{1-3,5-9} Student debt has been shown to impact choice of PT program, timing of life choices, post-professional education choices, and anxiety levels amongst graduates.^{1-3,5,6} Similar findings have been reported in medicine and other health professions as well.⁸⁻¹⁴ For internal medicine resident physicians, who are also heavily burdened by debt, higher student debt levels have been associated with lower quality of life, increased symptoms of burnout, and lower scores on standardized examinations.¹³ Limited research is available on the effects of student debt in occupational therapy, speech and language pathology, and athletic training, with studies focused more on implications of low salaries and burnout, not directly on student debt.¹⁵⁻¹⁷ Student loans are the second largest class of debt held by Americans, surpassing credit card debt and car loans.^{6,8,9,14} Clearly, student loans and the associated debt are a significant factor for many individuals and particularly graduates of costly healthcare professional education programs in the US.

Like many health professions, the debt load for PT students is large and continues to rise while starting salaries have not increased at the same rate to match the costs of education.^{7,9,18} In fact, annual tuition of PT education in the US (for a public, in-state school) has risen 18.2% from 2004-2016 when adjusted for inflation.⁷ At debt levels of \$120,000 or more, new graduates may experience financial hardship for a number of years into their career, since the standard loan repayment amount exceeds 15% of their salary.⁷ Based on standard repayment plans, PT graduates only meet recommended payment benchmarks (without financial hardship) if their total debt is less than \$86,563.⁹ PT practice owners, specifically those in rural areas, have expressed the inability to employ new graduates at pay rates that are sufficient to cover large student loan burdens of these early professionals while still attempting to remain financially viable in their small business model.¹⁹ This is nearly the same issue faced by rural communities when attempting to attract primary care physicians.²⁰

Since smaller clinics may not be able to provide the same financial incentives eg, (sign on bonuses, higher salaries) that larger clinics may offer, it is likely that fewer graduates of healthcare programs will consider employment in rural settings contributing to the continued shortage of physical therapists in those areas.¹⁹ The concept of a valuable and cost-efficient PT education has not yet been fully studied but has been proposed as a possible path forward in reducing student debt while still maintaining educational quality.²¹ Jette has proposed possible solutions to improving educational value.⁴ Since tuition for most colleges and universities in the US is determined per credit hour, reducing the total number of credit hours in a doctor of physical therapy (DPT) program would result in reduced cost in PT education. Increasing program capacity to admit more students also could prevent increases in tuition.

Finally, adding a paid internship at the end of DPT education would allow earlier earning potential for DPT students, which could reduce overall debt.⁴ Currently, clinical education constitutes a substantial portion of time in the physical therapy curriculum. In fact, the Commission on Accreditation in Physical Therapy Education (CAPTE) requires a minimum of 30 weeks of full-time clinical education for all DPT programs, with a reported range of 30 to 56.6 weeks across currently accredited programs.²² Many programs choose to end the curriculum with a longer full-time clinical experience ranging somewhere between 6-24 weeks, referred to as a terminal clinical education experience. There is no requirement that any of the clinical education experiences are paid, and traditionally, these experiences have not yielded any type of salary or stipend to the student. The American Council of Academic Physical Therapy (ACAPT) passed a motion in October 2020 that opposes direct monetary payment for fulltime clinical experiences, and existing contractual relationships between the academic program and clinical sites typically specify there is no financial exchange.²³

The study institution has had an option for students to complete their professional PT education with a traditional 16-week terminal clinical education experience or one of two nontraditional clinical education opportunities: 1) yearlong internship (YLI) model, or 2) an internship to residency model. In the YLI, the first 16 weeks occur prior to graduation and typically are unpaid. Following graduation, the intern continues in the "post-graduation" phase for the remaining 8 months of the yearlong commitment. This post-professional phase includes formal mentorship throughout the year, and the new graduate is paid a reduced salary commensurate with expectations for reduced productivity and continued mentor support during the 8-month novice, or new graduate, period. The second nontraditional option for students is termed "internship to residency" where students complete post-professional residency education at the same site as their traditional 16-week terminal clinical education experience.



Figure 1: Clinical Education Models

As in the YLI, new graduates in the internship to residency model receive formal mentorship as part of their residency education, are paid a reduced salary, and the cost of the residency is waived. These three options were implemented with the graduating class in 2016 following a revision of the PT curriculum several years earlier to support this opportunity. For all three models, students self-select which terminal experiences they apply to after learning which program affiliated clinical sites have offered one or more positions for that year. Sites review applications and determine which students are invited for interviews. Following interviews, both students and sites categorically rank their preferences as: preferred, acceptable, and “not a fit.” The Program then completes a matching process of students to terminal clinical experiences based on a combination of the site rankings and student rankings.

There are numerous benefits of a YLI to both the student/new graduate and the clinical site including sustained mentorship to facilitate the transition of the student to new professional at the point of graduation.²⁴⁻²⁵ Despite the benefits and support for the YLI model, this study program has seen a notable trend over the past 5 years where many of the YLI spots have remained unfilled during student selection (9% of offered sites were not used in 2016 compared to 41% in 2019). Anecdotally, the YLI is considered a “draw” for applicants during the admissions process and applicants voice this in their applications, interviews, and in discussions with current students. However, just two years later when students are in the process of applying for and indicating preferences for their terminal clinical education experience, there appears to be much less interest in securing a YLI position.

There is an insufficient understanding and limited literature to clarify decision-making criteria that influence decisions by students on their selection of terminal clinical experiences in PT education.²⁶ As such, the purpose of this study was to explore the extent to which finances and other factors influenced the decision making by students in the study program when applying to and selecting their terminal clinical experiences. Specifically, we hypothesized that amount of student debt may influence whether students select the nontraditional models (YLI model or the internship to residency option) as their terminal clinical education experience since the new graduate salary in both of these models is reduced. A secondary aim was to identify other factors that also influenced these decisions, such as, geographic location, type of experience offered, expertise of the clinical instructor, etc. This information could assist in future development and resource allocation of the program towards clinical education experiences for PT students and could offer a better understanding of the impact these factors may have on clinical education in other health profession education programs that rely on clinical education as a required curricular component.

MATERIALS AND METHODS

This study was reviewed and determined to be exempt as non-human research by the State’s Multiple Institutional Research Board (Protocol #20-1872).

Criteria for Subject Selection

Participants were recruited from four recent graduating classes in 2016-2019 when all graduates had the opportunity to apply to a nontraditional experience (YLI or internship to residency). An initial email invitation to participate in the study survey was sent to 250 graduates with email addresses provided by the study program’s Alumni Association. Participation in the survey was voluntary.

Two follow up reminders were sent over a 3-week period, at which time the survey was closed. Alternative email addresses known for some of the graduates who had remained connected to the Program were also included in the second follow up reminder sent.

Survey Instrument

Survey questions were developed following a review of surveys published in the literature related to this topic.^{12,18,27} In addition to demographic information, respondents were asked to identify the importance of several factors in deciding which sites they chose to apply to, and when ranking sites, these factors included total student loan debt level at the time they would be graduating from the DPT program and personal relationship status at the time of application for their terminal experience. There was also an open text box for respondents to indicate additional factors that were important but not listed. An internal reliability analysis was conducted and found to have a Cronbach's alpha of .749. The survey was administered via an anonymous link using Qualtrics software (version 5.20, Provo, UT). See appendix for survey details.

Statistical Analysis

A logistic regression model was used to determine the relationship between respondents' reported student debt with the likelihood of the respondent choosing the nontraditional experiences (YLI and internship to residency) or the traditional 4-month clinical experience. The two options of YLI and internship to residency were collapsed into one dichotomous category as both options represented a non-traditional terminal experience that required a greater time commitment and reduction in salary in the post-graduation phase of the experience when compared to the 4 month traditional experience. This category was coded as "yes" (1) for those respondents who included either a YLI or internship to residency as part of their final experience choice. Respondents who only selected the traditional clinical education model were coded as a "no" (0).

A dichotomous debt category of \$25,000 or less (coded 0) and greater than \$25,001 (coded 1) was the independent variable used in the logistic regression model. Analysis was also conducted with debt categorized as \$100,000 or less (coded 0) and greater than \$100,001 (coded 1). However, there was no difference in findings and this analysis was removed for parsimony. The cut-off of \$25,001 was chosen to capture those respondents who had little to no debt as compared to respondents that reported debt in higher numbers.

A univariate model was first run exploring the relationship of student debt and likelihood to select a non-traditional terminal clinical experience; however, this model was not significant, nor had a high Cox and Snell pseudo-R² of .004. Consequently, a multi-variate model was ultimately used with 6 control variables and the variable of study, student debt.

The index of control variables used included: age (continuous variable), financial support-self (dichotomous category; 0 = no, 1 = yes), financial support-family or spouse (dichotomous category; 0 = no, 1 = yes), financial support-scholarships or grants (dichotomous category; 0 = no, 1 = yes), gender (0 = male, 1 = female), and relationship status (dichotomous category; 0 = single, 1 = committed relationship). It should be noted that although the respondents were also able to identify a fourth type of financial support they received in the form of loans, this variable was not included due to high correlation with the concept of debt (Pearson correlation of .81, collinearity tolerance of .361) and consequently removed from the model as the primary question focuses on the amount of student debt. The final logistic regression model is as follows:

$$\ln(p/1-p) = \beta_0 + \beta_1(\text{student debt}) + X$$

Where X is the index of control variables.

An additional analysis occurred between respondents' reported considerations when applying for their terminal experiences and the respondents' considerations when categorically ranking their terminal experiences as preferred, acceptable and not a fit. As part of the survey, respondents were asked to use a 5-point Likert scale to indicate the level of importance of 14 different decision-making criteria, with 5 being "deal maker/breaker" and 1 being "not important at all." The numerical values for each respondent for each of the 14 decision-making criteria categories were used to calculate an average (mean) response for each category. Mean rating scores can be treated as continuous data.²⁸ Paired sample t-tests using the mean scores of the Likert ratings were conducted to determine if there was a statistical difference between the 14 decision-making criteria as considerations for applying as compared to the same categories as considerations for experience ranking. All statistical analyses were conducted in SPSS (Version 26, 2019). Based on visual inspection of the histogram and Q-Q plots, the assumption of normal distribution of data was met to support the use of the paired t-tests used. This assumption of data normality was confirmed by an outside statistical expert consultant in the study program's university who inspected the histogram and Q-Q plots.

RESULTS:

The survey was completed by 76 respondents, which represents a 30.4% return rate. Of 250 graduates, 4 emails were returned as “undeliverable.” The mean age of the respondents was 29.2 with a low age of 24 years and a high age of 44 years. Additional descriptive statistics are provided for study participants in Table 1 to include demographic distributions between the dichotomous debt categories. The number of respondents who included either a YLI or Residency as part of their terminal clinical experience options was 36 (47.4%) as compared to 40 (52.6%) respondents who only considered a traditional 4-month terminal experience.

Table 1. Participant Demographics

Characteristic or Variable	No. (%) N=76	No. (%) \$25,000 or less	No. (%) \$25,001 or more
Sex			
Male	13 (17.1)	4 (5.3)	9 (11.8)
Female	61 (80.3)	14 (18.4)	47 (61.8)
Prefer to not respond	2 (2.6)	1 (1.3)	1 (1.3)
Ethnicity			
Asian/Pacific Islander	4 (5.3)	3 (3.9)	1 (1.3)
Hispanic/Latino/a	2 (2.6)	1 (1.3)	1 (1.3)
Black/African American	1 (1.3)	0	1 (1.3)
White	64 (84.2)	13 (17.1)	51 (67.1)
Biracial/Multiracial	3 (3.9)	2 (2.6)	1 (1.3)
Other	1 (1.3)	0	1 (1.3)
Prefer to not respond	1 (1.3)	0	1 (1.3)
Relationship Status			
Single	26 (34.2)	7 (9.2)	19 (25)
Married/Committed Relationship	50 (65.8)	12 (15.8)	38 (50)
Number of Dependents			
0	70 (92.1)	17 (22.4)	53 (69.7)
1	2 (2.6)	1 (1.3)	1 (1.3)
2	2 (2.6)	1 (1.3)	1 (1.3)
More than 2	2 (2.6)	0	2 (2.6)
Graduation Year			
2016	17 (22.4)	0	17 (22.4)
2017	14 (18.4)	6 (7.9)	8 (10.5)
2018	17 (22.4)	4 (5.3)	13 (17.1)
2019	28 (36.8)	9 (11.8)	19 (25)
Type of Undergraduate Institution attended for Bachelor degree			
In-State Public	38 (50)	7 (9.2)	31 (40.8)
Out of State Public	20 (26.3)	5 (6.6)	15 (19.7)
Private	18 (23.7)	7 (9.2)	11 (14.5)
Previous Graduate Degree			
Yes	7 (9.2)	1 (1.3)	6 (7.9)
No	69 (90.8)	18 (23.4)	51 (67.1)
Type of Financial Support for PT education*			
Self†	36 (47.4)	7 (9.2)	29 (38.2)
Spouse/Family	39 (51.3)	17 (22.4)	22 (28.9)
Scholarships/Grants	38 (50)	6 (7.9)	32 (42.1)
Loans‡	55 (72.4)	2 (2.6)	53 (69.7)
Debt at \$25,000 Frequencies	76 (100)	19 (25)	57 (75)

Note. N=76. *Participants could identify as many types of financial support as was applicable to their situation. †Self support was not defined for respondents and could include savings, current income from a job, or other financial resources available to apply to the cost of attending PT school. ‡Loan category not included in logistic regression model due to multi-collinearity with debt category.

The logistic regression model had a Cox and Snell R^2 value of 0.167 indicating 17% of the variance is explained by the model. The debt variable did not significantly predict whether the respondent was likely to choose the nontraditional category of terminal clinical experience ($p = 0.256$, $\text{Exp}(B) = 0.018$). Table 2 provides detailed regression results for the debt variable and control variables within the model. There were significant results in two of the control variables, respondent age and relationship status. For every year increase in respondent age, respondents were 1.15 times more likely to select the nontraditional option ($p = 0.037$, $\text{Exp}(B) = 1.150$). Respondents who were in a committed relationship were 73% less likely to select a nontraditional option as compared those who identified as single ($p = 0.026$, $\text{Exp}(B) = 0.270$). A post-hoc power analysis was completed and found the regression model to be sufficiently powered ($1-\beta$ error probability = .914).

Table 2. Regression Results for Terminal Experience Selection and Debt at \$25,000

	Coeff.	se	P	Exp(B)
(Intercept)	-4.023	2.361	0.088	0.018
Debt	0.870	0.765	0.256	2.386
Age	0.140	0.067	0.037	1.150
Public in-State	0.086	0.672	0.898	1.090
Public out-of-state	0.353	0.792	0.656	1.423
Financial support - self	0.446	0.542	0.411	1.562
Financial support – family/spouse	1.095	0.622	0.078	2.991
Financial support – scholarship/grants	-0.538	0.566	0.342	0.584
Gender	-0.772	0.730	0.290	0.462
Relationship Status	-1.310	0.588	0.026	0.270

The second analysis compared the 14 different decision-making criteria means between respondent considerations for applying to and ranking terminal experiences. Table 3 provides descriptive statistics for the paired decision-making criteria using a 5-point Likert scale organized from highest to lowest application decision-making criteria based on application consideration means. The results of the mean comparisons between the application consideration mean and the ranking consideration mean via paired sample t-tests is provided in Table 4. There are two significant mean differences within the 14 decision-making criteria. Respondent considerations for interprofessional opportunities dropped significantly from application considerations to ranking considerations ($p=.015$). The same trend is seen in respondent considerations for saving money during their terminal experience ($p=.009$). In both cases, the respondents rated these decision-making criteria higher as a consideration for application and lower as a consideration for ranking their preferred experiences.

Table 3. Paired Student Consideration Categories Descriptive Statistics*

		Median	Interquartile Range	Mean	Std. Deviation
Pair 1	Apply: Patient Population	4	1	4.08	.779
	Rank: Patient Population	4	1	4.03	.783
Pair 2	Apply: Practice Setting	4	1	3.97	.816
	Rank: Practice Setting	4	1	4.01	.757
Pair 3	Apply: Geography of Site	4	2	3.62	1.107
	Rank: Geography of Site	4	2	3.54	1.194
Pair 4	Apply: Culture of Site	4	1	3.57	.699
	Rank: Culture of Site	4	1	3.61	.801
Pair 5	Apply: Type of Clinical Experience†	4	1	3.55	.944
	Rank: Type of Clinical Experience†	4	1	3.54	1.076
Pair 6	Apply: Reputation of Site	4	1	3.54	.738
	Rank: Reputation of Site	4	1	3.49	.825

Pair 7	Apply: Save Money	3	1	3.22	.974
	Rank: Save Money	3	2	3.00	1.083
Pair 8	Apply: Site as Future Job Opportunity	3	2	3.16	1.108
	Rank: Site as Future Job Opportunity	3	2	3.11	1.090
Pair 9	Apply: Other Life Commitments	3	2	3.08	1.152
	Rank: Other Life Commitments	3	2	3.07	1.204
Pair 10	Apply: Mentorship Available	3	2	3.04	.972
	Rank: Mentorship Available	3	2	2.95	1.070
Pair 11	Apply: Interprofessional Learning Opportunities	3	2	2.99	.986
	Rank: Interprofessional Learning Opportunities	3	2	2.82	1.042
Pair 12	Apply: Productivity Expectations	3	1	2.82	.905
	Rank: Productivity Expectations	3	1	2.72	.903
Pair 13	Apply: Student Debt	3	2	2.72	1.239
	Rank: Student Debt	3	3	2.64	1.197
Pair 14	Apply: Within Cohort Competition for Site	2	2	2.29	.977
	Rank: Within Cohort Competition for Site	2	2	2.22	1.028

Note. N=76. "Apply" refers to the respondent considerations at the time of applying for terminal experiences, "Rank" refers to respondent considerations at the time of rank-ordering terminal experiences for matching. *Pairs are ordered from highest consideration to lowest consideration based on application consideration Likert score means. † Type of Clinical Experience refers to whether the clinical experience was the traditional 16-week experience, the YLI experience, or the internship to residency experience.

Table 4. Comparison of Means Between Categories for Applying and Ranking Terminal Experiences*

		Paired Differences					T	Df	Sig. (2-tailed)
		Mean Difference (Apply – Rank) †	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Patient Population	.053	.630	.072	-.091	.197	.728	75	.469
Pair 2	Practice Setting	-.039	.756	.087	-.212	.133	-.455	75	.650
Pair 3	Geography of the Site	.079	.744	.085	-.091	.249	.925	75	.358
Pair 4	Culture of the Site	-.039	.682	.078	-.195	.116	-.505	75	.615
Pair 5	Type of Clinical Experience †	.013	.683	.078	-.143	.169	.168	75	.867

		Paired Differences					T	Df	Sig. (2-tailed)
		Mean Difference (Apply – Rank) [‡]	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 6	Reputation of the Site	.053	.781	.090	-.126	.231	.587	75	.559
Pair 7	Save Money	.224	.723	.083	.058	.389	2.697	75	.009
Pair 8	Site as Future Job Opportunity	.053	.630	.072	-.091	.197	.728	75	.469
Pair 9	Other Life Commitments	.013	.577	.066	-.119	.145	.199	75	.843
Pair 10	Mentorship Available	.092	.615	.071	-.048	.233	1.306	75	.196
Pair 11	Interprofessional Learning Opportunities	.171	.598	.069	.035	.308	2.496	75	.015
Pair 12	Productivity Expectations	.092	.657	.075	-.058	.242	1.223	75	.225
Pair 13	Student Debt	.079	.726	.083	-.087	.245	.948	75	.346
Pair 14	Within Cohort Competition for Site	.066	.596	.068	-.070	.202	.962	75	.339

Note. *Pairs are ordered from highest consideration to lowest consideration based on application consideration Likert score means.

[†] Type of Clinical Experience refers to whether the clinical experience was the traditional 16-week experience, the YLI experience, or the internship to residency experience. [‡]A positive mean difference score indicates a higher mean score for applying considerations as compared to the ranking consideration mean for the same category.

Aggregate mean scores of both the application consideration and categorical ranking consideration for each decision-making criterion were calculated. This calculation demonstrates that the most important criterion when choosing the terminal clinical experience was patient population (aggregate mean = 4.06), followed by type of clinical setting (aggregate mean = 3.99), culture of the clinic (aggregate mean = 3.59), geographic location (aggregate mean = 3.58), and the clinical education model (aggregate mean = 3.55). The decision-making criterion with the lowest aggregate mean was within cohort competition (aggregate mean = 2.26) followed by student debt (aggregate mean = 2.68).

DISCUSSION

The purpose of this study was to explore the extent to which finances, primarily student debt, but also other factors, influenced students' decisions in applying to and ranking selection of terminal clinical experiences as the culminating clinical experience of their PT education in the US.

The results demonstrated that several factors were found to be important for students in choosing these final clinical education experiences. In fact, ten out of the fourteen decision-making criteria included in the survey had mean aggregate scores of greater than 3/5 on the Likert scale, which is equivalent to a rating of "Important." The most important criteria in choosing the terminal clinical education experience were patient population, type of clinical setting, culture of the clinic, geographic location, and the clinical education model. Gangaway and Stancanelli conducted a similar study with physical therapy and occupational therapy students, and they also found that several factors influenced students' decisions when making selections for clinical experiences.²⁶ The factors deemed most important were financial considerations, clinical specialty, program requirements, and reputation of the facility. The participants in the Gangaway and Stancanelli study made selections prior to their first fulltime clinical experience, which

could explain the slight difference in priorities compared to those in the current study who were asked about the importance of factors when selecting the terminal clinical education experience.

The results of this study indicate that amount of student debt did not predict whether the respondent, applied for the YLI as their terminal clinical experience. Likewise, student debt appeared to carry less importance than other factors when considering which sites to apply to and when categorically ranking sites. This finding is similar to that of Stepp and colleagues who looked at the impact of debt on initial job characteristics of DPT graduates.¹⁸ They found that amount of student debt was not perceived to be a top factor in initial job selection.¹⁸ However, there is emerging evidence that amount of student debt and associated stress can impact future career plans in PT graduates in the US.^{3,5} The desire of students to save money during the terminal clinical experience was found to be an important factor when deciding on which sites to apply to, and less of a factor when categorically ranking the sites. It could be that students chose not to apply to some sites in order to save money, so this was no longer a consideration when categorically ranking the sites. It also appears that students may not have seen a direct link between wanting to save money and considering amount of debt when selecting their terminal clinical education experiences. Stepp also found a disconnect between the importance of amount of debt load and strategies to manage debt with factors that were ranked as more important, such as, friendliness of staff and availability of mentors.¹⁸

Factors of age and relationship status were predictors of whether a student chose to apply to the nontraditional options for their terminal clinical education experience. Students who were older (age range of respondents was 24-44 years) were more likely to apply to the nontraditional options than their younger peers. Relationship status also predicted whether the student chose to apply to the nontraditional models. Students in a committed relationship were less likely to apply to the nontraditional models as compared to students who self-identified as single. As the study program continued to build a consistent cohort of clinical partners able to offer the YLI for the classes of 2016 – 2019, 59 – 69% of the YLI sites were located in rural areas or in another state and geographical location. Students in committed relationships may not have wanted to live distant from a partner/spouse for a full year (YLI) or longer (16 months for completion of the Residency program option). Although consideration for interprofessional opportunities was of less importance overall compared to other decision-making criteria, there was a significant difference between the importance of interprofessional opportunities when students initially selected sites to apply to compared to when they categorically ranked sites.

These findings could have implications for mechanisms used to place students for clinical education experiences and on resources allocated to further developing relationships and contracts at additional sites for the terminal clinical education experience. Healthcare programs with fulltime clinical education may need to consider processes used to place students, specifically if and how they will address factors deemed important to the student (when selecting terminal clinical education experiences). This is consistent with findings and recommendations in the final report from the APTA Clinical Education Placement Process Task Force, which outlined 9 recommendations for Physical Therapist and Physical Therapist Assistant Education Programs.²⁹ Results of the Task Force student survey indicate that students want more input with selecting their clinical education experiences. Students identified various factors to be important, with the most important factors being clinical sites that offer the best clinical experience and being placed closest to their geographical and housing resources.²⁹

The results of this study do not explain the increasing trend observed by the study program of students reluctance to select YLI sites. Many Physical Therapy Program resources were allocated to develop a consistent cadre of sites offering the YLI. Closer attention to the factors that students deemed to be more important, such as patient population, type of clinical setting, and geographic location, may guide specific recruitment and development efforts in the future. It may be difficult, however, to change the type and geographic location of existing YLI sites because of the financial commitment and investment they have to make in order to offer this model of clinical education. Periodic advising sessions between students and the clinical education faculty advisors may help students better understand the different clinical education models and benefits while carefully considering potential new sites for recruitment based on location and type of experience.

Limitations

There were several limitations in this study. First, this study involved participants who attended (and graduated) from a single institution, which may limit the ability to generalize the results to other programs. There was a lower response rate to the survey than expected. With only 30% of graduates responding, non-response bias could have been present, as it is unclear whether graduates who did not complete the survey shared similar views on which characteristics were most important when considering their final clinical education experience. Similarly, those who responded to the survey may represent individuals who were particularly interested in sharing opinions about the YLI model of clinical education, which may have influenced their response and therefore, the overall results of the study. A validated survey instrument pertinent to this study was not available, and therefore, the researchers created their own. Although the survey was found to have acceptable internal reliability (Cronbach's alpha of .749),

the survey instrument used in this study was not validated. Finally, the graduates were responding from 1-4 years following the time they were students making these decisions. Memory around their decisions related to site selection and ranking may have been altered or changed over time.

Recommendations for Future Research

Additional exploration using qualitative methodology may provide more in-depth data and a greater understanding around this Program's experience. Using a prospective design may better explain how students make decisions about terminal clinical education experiences in real time. Exploring additional financial and non-financial variables may also add insight regarding student choice. Further exploration of the experiences of other PT education programs that offer a similar clinical education model is warranted to determine whether regional similarities and/or differences exist across the US. The impact of the COVID pandemic on educational, financial and geographical considerations may need to be considered in future studies and should also be remembered when considering the results of this study since it was completed in the years just prior to the pandemic. Finally, further research is needed to examine and implement best practices in clinical education with attention on outcomes, efficiency, and cost.

CONCLUSION:

The results of this study found that student debt was not an important factor in selecting the terminal clinical education experience and did not predict whether a student would apply to or select a nontraditional terminal experience of either the yearlong internship model or internship to residency model. Instead, students considered multiple decision-making criteria when selecting their final clinical education experience. Our findings also suggest that not all factors are viewed the same, with age and relationship status potentially carrying more influence on students' decisions. Health professions programs with clinical education requirements may want to consider the extent to which student debt, financial responsibilities during the clinical experience, and other variables may be accounted for when recruiting sites and placing students.

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APPENDIX

Survey Questionnaire

The risks for this survey are minimal and include inconvenience and possible discomfort. You will be asked to provide financial information about your student debt which may feel uncomfortable. The benefits to participating include providing a better understanding of factors that influence students' decisions around choosing the yearlong internship, the 4-month traditional model, and/or the internship to residency model for the final clinical education experience. Your confidentiality will be maintained in the study survey and results will be reported in aggregate. If you would like to contact the Principal Investigator for this study, contact **Jenny Rodriguez: jenny.rodriguez@cuanschultz.edu** By clicking the button below, you acknowledge that your participation in the study is voluntary, you are 18 years of age, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason.

- Yes, take me to the survey (1)
- No, I would not like to complete the survey. (2)

Skip To: End of Survey If The risks for this survey are minimal and include inconvenience and possible discomfort. You will... = No, I would not like to complete the survey.

End of Block: Block 2

Start of Block: Demographic Information

Q1 Age:

Q2 Gender:

- Man (1)
 - Woman (2)
 - Non-binary (3)
 - I prefer to identify as: (4)
-
- I prefer not to respond (5)

Q3 Which of the following best describes you:

- Asian or Pacific Islander (1)
 - Hispanic or Latino (2)
 - Black or African American (3)
 - Native American or Alaska Native (4)
 - White or Caucasian (5)
 - Multiracial or biracial (6)
 - A race/ethnicity not listed here (please list) (7)
-

- I prefer not to respond (8)

Q4 Relationship status at the time of CE III/Internship application:

- Single (1)
- Married (2)
- Separated (3)
- Divorced (4)

- In a committed relationship (5)
 - I would describe my relationship at that time as: (6)
-
- I prefer not to respond (7)

Q5 Were you supporting anyone financially (child or adult) at the time of CE III/Internship application? If so, how many dependents?

- 0 (1)
- 1 (2)
- 2 (3)
- More than 2 (4)

Q6 Year graduated from the <redacted> PT program:

- 2016 (1)
- 2017 (2)
- 2018 (3)
- 2019 (4)

Q7 Type of undergraduate institution from which you received your first bachelor's degree:

- Public, in-state (1)
- Public, out of state (2)
- Private (3)
- Other/mixed (4)

Q8 Did you earn a previous graduate degree, completed prior to PT education?

- Yes (1)
- No (2)

Display This Question:

If Did you earn a previous graduate degree, completed prior to PT education? = Yes

Q9 Type of graduate institution from which you received a previous graduate degree (other than DPT):

- Public, in-state (1)
- Public, out of state (2)
- Private (3)
- Other/mixed (4)

Q10 Type of financial support received during DPT education (select all that apply):

- Self (1)
- Family/spousal support (2)
- Scholarships/grants (3)
- Loans (4)
- Other (5) _____

Q11 Total outstanding student loan debt at DPT graduation, including undergraduate debt (approximately):

▼ < \$25,000 (1) ... > \$250,000 (11)

End of Block: Demographic Information

Start of Block: CE III Questions

Q12 Which model(s) of clinical education did you **apply to** for your final clinical education experience?

- 4-month non-paid (CE III) (1)
- Year-long internship (2)
- Internship to residency (EIM) (3)

Q13 Please identify the importance of each of the following factors when deciding which sites to **apply to**.

	Not important at all (1)	Mostly unimportant (2)	Important (3)	Very important (4)	Deal maker/breaker (5)
Type of experience offered: Patient population (e.g. ortho, neuro, sports, women's health, pediatrics, geriatrics, etc.) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Type of experience offered: Setting (e.g. outpatient clinic, inpatient hospital, outpatient hospital-based, home health, school, skilled nursing facility, etc.) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Type of CE model (4 month non-paid [CE III], year-long internship, internship to residency) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reputation of clinic and/or CIs (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of mentorship after graduation (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Geographic location (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Culture of clinic (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Productivity expectations (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity to work on an interprofessional team (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Anticipated level of debt upon graduation (10)	<input type="radio"/>				
Life commitments (family, job, partner, etc.) (11)	<input type="radio"/>				
Potential future job opportunity (12)	<input type="radio"/>				
Opportunity to save money on housing, transportation, food, or other expenses during the experience (13)	<input type="radio"/>				
Perceived competition from classmates (14)	<input type="radio"/>				

Q15 List other factors that you considered when applying to sites:

Q14 Please identify the importance of each of the following factors when ranking ***the sites you applied to:***

	Not important at all (1)	Mostly unimportant (2)	Important (3)	Very important (4)	Deal maker/breaker (5)
Type of experience offered: Patient population (e.g. ortho, neuro, sports, women's health, pediatrics, geriatrics, etc.) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Type of experience offered: Setting (e.g. outpatient clinic, inpatient hospital, outpatient hospital-based, home health, school, skilled nursing facility, etc.) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Type of CE model (4 month non-paid [CE III], year-long internship, internship to residency) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Reputation of clinic and/or CIs (4)	<input type="radio"/>				
Availability of mentorship after graduation (5)	<input type="radio"/>				
Geographic location (6)	<input type="radio"/>				
Culture of clinic (7)	<input type="radio"/>				
Productivity expectations (8)	<input type="radio"/>				
Opportunity to work on an interprofessional team (9)	<input type="radio"/>				
Anticipated level of debt upon graduation (10)	<input type="radio"/>				
Life commitments (family, job, partner, etc.) (11)	<input type="radio"/>				
Potential future job opportunity (12)	<input type="radio"/>				
Opportunity to save money on housing, transportation, food, or other expenses during the experience (13)	<input type="radio"/>				
Perceived competition from classmates (14)	<input type="radio"/>				

Q16 List other factors that you considered when **ranking** sites:

End of Block: CE III Questions