



# Motivators for Volunteerism in Doctor of Physical Therapy Students During the COVID-19 Pandemic

A National Survey

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## Abstract

**Background:** Physical therapy programs are increasingly utilizing pro bono clinics as an element of education. Obtaining an understanding of what motivates students of physical therapy (SPT) to volunteer is important as pro bono clinics serve the under-insured in the community. The Volunteer Functions Inventory (VFI) explores the motives behind volunteerism and has not yet been used to analyze the SPT population. The primary purpose of this study is to investigate motivational factors involved in SPT participation in their pro-bono clinics.

**Methods:** All 261 accredited physical therapy programs in the United States were contacted and asked to distribute the survey to their students. Upon agreement, the anonymous survey link was sent to the representative to be dispersed to the students via email. Qualtrics Survey Software® was used to collect the data. Descriptive statistics, independent t-test, and logistic regression were used to analyze the data. SPSS v26 was used. The alpha level was set to  $p < 0.05$ .

**Results:** The survey had 274 SPT participants in this study. The participants were split into participation ( $n=189$ ) and non-participation ( $n=85$ ) groups. Pro bono clinics made changes in response to the coronavirus-disease-19 (COVID-19) pandemic by temporarily pausing treatment (56.2%), changing from in person to telehealth on a video platform (44.9%) or telehealth on a phone call (9.5%).

**Conclusions:** Similar to previous studies on volunteer motivators in medical students, those who volunteered were significantly more motivated by their values including altruistic and humanitarian concerns compared to those who did not volunteer ( $p < 0.05$ ). This small cross-sectional study found that SPT were more motivated to volunteer based on their altruistic concern. Over half of the SPT respondents reported changing pro bono services or pausing services due to the COVID-19 pandemic.

## Background

Forty percent of accredited or developing physical therapy programs have pro bono clinics, and many utilize these services as a required or volunteer based element of their professional curriculum.<sup>1-3</sup> These clinics provide students with many learning opportunities including the development of hands-on experience, leadership skills, and administrative abilities.<sup>4</sup> As the population of uninsured Americans younger than 65 years reached 12.1% (32.8 million) in 2019,<sup>5</sup> pro bono clinics additionally provide community benefit.<sup>1</sup> A recent systematic review reported that those who

were underserved or uninsured were the most common recipients of physical rehabilitation at pro bono clinics.<sup>6</sup> The American Physical Therapy Association (APTA) supports the incorporation of pro bono physical therapy services into the community. Principle 8A of the APTA Code of Ethics states, "[P]hysical therapists shall provide pro bono physical therapy services or support organizations that meet the health needs of people who are economically disadvantaged, uninsured, and underinsured."<sup>7</sup> Pro bono clinics exist to deliver care to the underserved sub-population in the local community, allowing physical therapists from local clinics to observe Principle 8A, and to

serve as a personal and professional growth opportunity for students.

Prior research has attempted to understand why student physical therapists (SPT) and other health science students volunteer in pro bono clinics.<sup>8-12</sup> One such study found that the largest barrier to SPT volunteerism were clinic hours of operation while the largest motivator was extra credit for course work.<sup>8</sup> Another study found volunteer site management and training to be important factors in students' motivation to volunteer.<sup>9</sup> Altruism, learning, skill development, and social justice advocacy are motives that have been found to be positively associated with volunteerism in the general population.<sup>10</sup> The Volunteer Functions Inventory (VFI) is a valid and reliable questionnaire used to assess motivators of volunteerism.<sup>11,13</sup> The VFI has been used to study volunteers in various settings such as athletic events, schools, health care, public health, and communities, but has not been used to describe the motivators in SPT who volunteer at a pro bono clinic.<sup>13</sup>

The coronavirus disease-19 (COVID-19) pandemic impacted how patients, insured or uninsured, accessed healthcare. Many outpatient physical therapy clinics closed for weeks to months to mitigate the spread of COVID-19.<sup>14</sup> As COVID-19 cases rose in spring of 2020 and schools closed in person classes, student-run physical therapy pro bono clinics were forced to make changes in how they delivered care to underserved patients.<sup>15</sup> Similar to outpatient physical therapy clinics and aligned with their educational programs, student run physical therapy pro bono clinics were required to find new ways to deliver care.<sup>14</sup> Some physical therapy pro bono clinics transferred from in person services to telehealth or temporarily paused in effort to decrease transmission of the virus and decrease the burden on the health care infrastructure, while others provided in-person and telehealth options.<sup>16-19</sup> The number of SPT that provided alternative pro bono services due to the pandemic has not been previously defined.

The primary purpose of this study is to investigate various motivational factors involved in SPT participation or non-participation in their university pro bono clinic across Doctor of Physical Therapy (DPT) programs throughout 2020. The

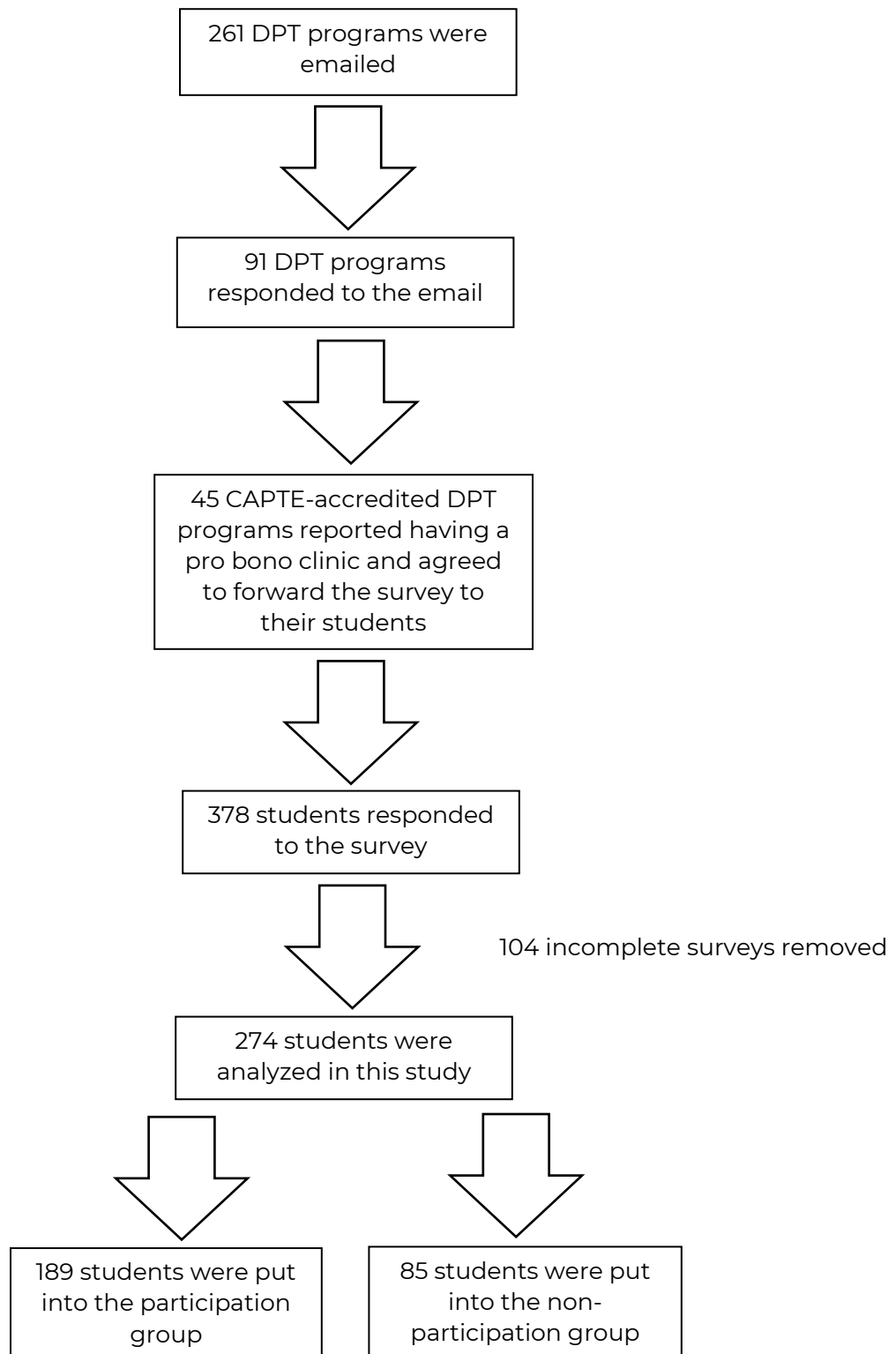
secondary aim of this study is to research the COVID-19 pandemic's impact on the physical therapy services delivered by the pro bono clinics.

## Methods

This cross-sectional study was conducted in January through March 2021 to study the population of SPT that have pro bono clinics at their university. An email in January 2021 was sent to the director or representative of all 261 Commission of Accredited Physical Therapy Education (CAPTE)-accredited DPT programs in the United States. The email inquired whether the program had a pro bono clinic. If the program did have a pro bono clinic the corresponding person was asked if they were willing to send a survey to their active students. A second email was sent in February 2021 that contained an electronic link (Qualtrics Online Survey Software, 2021, Qualtrics LLC, Provo, Utah) to a survey regarding SPT participation in their university's or university partner's pro bono clinic during the year 2020. Students who reported not having a pro bono clinic associated with their program were excluded from this study along with any incomplete surveys. Students were included if they confirmed that their program had a pro bono physical therapy clinic, regardless of if the clinic was temporarily unavailable due to the COVID-19 pandemic. Respondents did not receive compensation for participating in the study. Respondents were split into non-participation group and participation group. In this study, participation is defined as volunteering in their pro bono clinic at and above their programs' required amount, while non-participation is defined as not volunteering in their pro bono clinic at the program's required amount or not volunteering at all.

The VFI was chosen for this study because the survey describes volunteerism by measuring the motive underlying the respondents' involvement.<sup>11</sup> This survey analyzes the inherent motivational aspects of volunteering through the reasons, purposes, plans, and goals that bring an individual to volunteer.<sup>11</sup> The VFI items consist of six factors (social, values, understanding, career, enhancement, protective) that have acceptable to good internal consistency ( $\alpha=0.91-0.70$ )<sup>20</sup> and which the respondents rank by importance, for a

Figure 1. Study recruitment and grouping of participants



DPT: Doctor of Physical Therapy; CAPTE: Commission on Accreditation in Physical Therapy Education

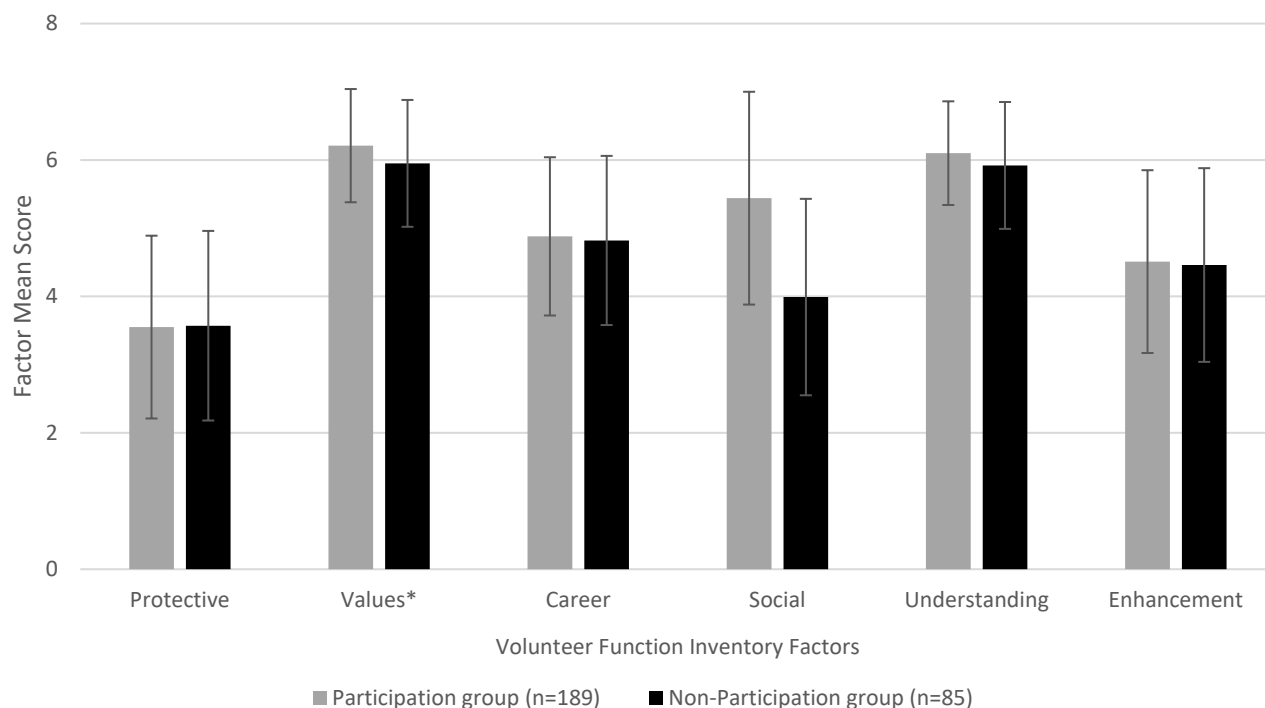
total of 30 statements ranked on a scale from 1 (not at all important) to 7 (extremely important/accurate).<sup>11</sup> The survey was divided into three sections: the VFI, questions regarding

**Table 1.** Demographics of participation and non-participation groups and program information

Variable	Participation group (n=189)	Non-participation group (n=85)	Total (N=274)
Gender – female, n (%)	156 (82.5)	63 (74.1)	219 (79.9)
Ethnicity – White	171 (90.5)	72 (84.7)	243 (88.7)
Private university	114 (60.3)	50 (59.5)	164 (60.1)
Graduation date 2022	111 (58.7)	25 (29.8)	136 (49.8)
Volunteered past programs' requirement	-	-	61 (32.3)
Age (years), mean (SD)	24.5 (3.0)	24.0 (4.0)	24.3 (3.3)
Cohort size	50.4 (15.4)	47.6 (16.3)	49.6 (15.7)

SD: standard deviation

**Figure 2.** Volunteer Function Inventory factor mean score by participation and non-participation groups



\*p<0.05

clinic changes due to COVID-19 and participation, and demographic questions (Online appendix, Table 2).

Descriptive statistics, independent t-tests, and logistic regressions were used to analyze the data on SPSS (version 26, IBM Corporation, Armonk, NY). Alpha level was set to p<0.05. This study was reviewed and considered exempt by the University of Michigan Institutional Review Board

(#HUM00193159).

## Results

### Demographics

Ninety-one of 261 of the CAPTE-accredited DPT programs responded to the original e-mail request (34% response rate), 45/91 of the programs reported having a pro bono clinic (Figure 1). Of the respondents, 32 programs reported

**Table 2.** Volunteer Function Inventory

Factor	Factor mean (SD)	Statement	Statement mean (SD)	Participant group, mean (SD)	Non-participant group, mean (SD)
Protective	3.6 (1.4)	No matter how bad I've been feeling, volunteering helps me to forget about it	4.5 (1.8)	4.5 (1.8)	4.6 (1.8)
		By volunteering I feel less lonely	3.7 (1.9)	3.7 (1.9)	3.7 (1.8)
		Doing volunteer work relieves me of some of the guilt over being more fortunate than others	3.0 (1.8)	3.0 (1.8)	2.9 (1.7)
		Volunteering helps me work through my own personal problems	3.1 (1.7)	3.1 (1.7)	3.2 (1.7)
		Volunteering is a good escape from my own troubles.	3.4 (1.7)	3.4 (1.7)	3.5 (1.8)
Values	6.1 (0.9)	I am concerned about those less fortunate than myself.	6.0 (1.0)	6.1 (1.1)	5.9 (1.1)
		I am genuinely concerned about the particular group I am serving.	5.7 (1.3)	5.9 (1.3)	5.4 (1.3)
		I feel compassion toward people in need.	6.3 (1.0)	6.4 (0.9)	6.2 (1.1)
		I feel it is important to help others.	6.5 (0.8)	6.5 (0.8)	6.4 (0.9)
		I can do something for a cause that is important to me.	6.1 (1.1)	6.20 (1.0)	5.91 (1.2)
Career	4.9 (1.2)	Volunteering can help me to get my foot in the door at a place where I would like to work.	4.3 (2.0)	4.2 (2.0)	4.5 (2.0)
		I can make new contacts that might help my business or career.	4.5 (1.9)	4.5 (1.9)	4.5 (1.9)
		Volunteering allows me to explore different career options.	4.6 (1.8)	4.6 (1.9)	4.6 (1.6)
		Volunteering will help me to succeed in my chosen profession.	5.7 (1.3)	5.8 (1.2)	5.5 (1.4)
		Volunteering experience will look good on my resume	5.2 (1.5)	5.2 (1.5)	5.1 (1.5)
Social	4.1 (1.5)	My friends volunteer.	3.8 (1.9)	3.8 (1.9)	3.8 (1.8)
		People I'm close to want me to volunteer.	3.3 (1.9)	3.3 (1.9)	3.3 (1.8)
		People I know share an interest in community service.	4.7 (1.7)	4.8 (1.7)	4.5 (1.6)
		Others with whom I am close place a high value on community service.	4.3 (1.8)	4.4 (1.8)	4.3 (1.8)
		Volunteering is an important activity to the people I know best.	4.0 (1.8)	4.1 (1.8)	3.7 (1.8)
Understanding	6.1 (0.8)	I can learn more about the cause for which I am working.	5.8 (1.9)	6.2 (1.0)	5.9 (1.2)
		Volunteering allows me to gain a new perspective on things.	6.1 (1.0)	6.1 (1.0)	6.0 (1.0)
		Volunteering lets me learn things through direct, hands-on experience.	6.5 (0.8)	6.6 (0.8)	6.4 (0.8)
		I can learn how to deal with a variety of people.	6.1 (1.0)	6.2 (0.9)	5.9 (1.1)
		I can explore my own strengths.	5.7 (1.2)	5.8 (1.2)	5.6 (1.2)
Enhancement	4.5 (1.4)	Volunteering makes me feel important.	4.7 (1.7)	4.7 (1.7)	4.6 (1.9)
		Volunteering increases my self-esteem.	4.6 (1.7)	4.6 (1.7)	4.6 (1.6)
		Volunteering makes me feel needed.	4.4 (1.8)	4.4 (1.8)	4.2 (1.8)
		Volunteering makes me feel better about myself.	4.3 (1.7)	4.3 (1.7)	4.3 (1.7)

Volunteering is a way to make new friends. 4.5 (1.7) 4.5 (1.7) 4.6 (1.7)

SD: standard deviation

**Table 3.** Associations between participation in pro bono clinics, gender, and VFI values scores

Model	Predictor	B	Standard error	Odds ratio	95% CI	P-value
Model 1	Gender	-0.3	0.3	0.7	0.4, 1.4	0.3
	VFI values factor	0.3	0.1	1.4	1.0, 1.8	0.0*

\*p<0.05

VFI: Volunteer Function Inventory; B: unstandardized beta; CI: confidence interval

mandatory participation in the programs' pro bono clinic. A total of 378 respondents answered questions on the survey, but 104 incomplete surveys were removed from final analysis for a total of 274 included for the final analysis (82.5% female, 88.7% white, 49.8% 2022 graduation year) (Table 1). The respondents were split into a participation group (n=189) and a non-participation group (n=85) based on self-reported hours. All regions of the United States were represented: Northeast (n=33), Midwest (n=161), West (n=7), and South (n=72) in this study.

*Motivational factors in the Volunteer Function Inventory*

Of the six VFI factors, respondents reported that values were the most important when participating in pro bono clinics (mean=6.1, standard deviation (SD): 0.9) and protective was the least important (mean=3.6, SD: 1.4) (Figure 2). The VFI statement that the respondents reported was most important when participating in pro bono clinics was "I feel it is important to help others" (mean=6.5, SD: 0.8) while the statement that the respondents reported least important was "[D]oing volunteer work relieves me of some of the guilt over being more fortunate than others" (mean=3.0, SD: 1.8) (Table 2). Respondents' motivation to participate in their pro bono clinics did not differ significantly by gender (Table 3).<sup>21</sup> The participation group was found to be significantly more motivated to participate in the pro bono clinic by their values compared to the non-participation group (p=0.04) (Figure 2).

*Pro bono physical therapy services in the COVID-19 pandemic*

The COVID-19 pandemic impacted the services provided by many pro bono clinics and

students' ability to participate in the clinic (Table 4). In this survey almost 60% (n=163) of respondents reported that the services changed at their pro bono clinic between March 2020 and December 2020. These changes included temporarily pausing treatment for a period of time (n=154, 56.2%), changing from in person to telehealth on a video platform (n=123, 44.9%), and changing from in person to telehealth on a phone call (n=26, 9.5%). On average, those who did participate in their programs' pro bono clinics did so seven times (SD: 7.2) between March 2020 and December 2020. Of the participation group, 32.2% (n=61) of respondents volunteered past their programs' requirements. A total of 68.3% (n=129) of respondents reported volunteering prior to the pandemic whilst 81.5% (n=154) of respondents reported volunteering during the pandemic.

**Table 4.** COVID-19 and pro bono clinics

Statement	n (%)
Changed type of service between March 2020- December 2020	163 (59.5)
Temporarily paused treatment for a period of time	154 (56.2)
In person to telehealth (video platform)	123 (44.9)
In person to telehealth (phone call)	26 (9.5)
Volunteered prior to COVID-19 pandemic (yes)	129 (68.3)
Volunteered during the COVID-19 pandemic (yes)	154 (81.5)
Average times participating in the pro bono clinic between March 2020 and December 2020, mean (SD)	7.0 (7.2)

COVID-19: coronavirus disease- 2019; SD: standard deviation

## Discussion

This study was novel as the VFI was used to describe motivators for participating in a sample of SPT, and the response of student-led physical therapy clinics to the COVID-19 pandemic was described for the first time. In this sample of SPT, those that participated in pro bono clinics, above and beyond a program's requirement, were significantly motivated to participate based on their values. The majority of respondents reported a change in services that their pro bono clinic provided during the year 2020.

Similar to prior studies on volunteer motivators in medical students, the majority of SPT respondents reported participating based on their value in helping others more than self-interest.<sup>10,22,23</sup> Although the values and understanding factors were both highly important to the respondents' motivation, only values was significantly different between the participation and non-participation groups (Figure 2). A systematic review of the VFI by Chacón et. al. reported a VFI factor order of amongst all populations of volunteers based on mean scores: values, understanding, enhancement, social, career, and protective.<sup>13</sup> This population varied from 20,375 to 21,988 participants that volunteered in health, social, education, sports, environmental, and civil defense settings. In our study of 274 participants, SPT have a VFI factor order of values, understanding, career, enhancement, social, and protective. Overall, the SPT population reported higher mean scores for each factor compared to Chacón et. al. population as the SPT population had mean scores ranging 0.3 to 2.0 above Chacón et. al. population's mean scores. The largest discrepancy between Chacón et. al. population's and the SPT population's mean scores was found with the career factor with SPT found to be more motivated to enhance their professional or academic knowledge. Otherwise, like Chacón et. al., this SPT VFI factor order had values and understanding as the highest mean scores and protective as the lowest mean score.

Understanding students' motivation to participate in pro bono clinics is an important aspect of the maintenance and function of physical therapy pro bono clinics. The APTA encourages service in physical therapy pro bono clinics in their

Code of Ethics in effort to fulfill the social responsibility physical therapists have on a local, national, and global level.<sup>24</sup> In addition, SPT benefit from their service to others. A qualitative study investigating SPT from one program reported that the students perceived that they had improved clinical skills and personal growth through a physical therapy pro bono clinical experience.<sup>25</sup> While students are unable to develop hands on experience over the telehealth platform, they were able develop their leadership skills, communication skills, and administrative abilities.<sup>4,26</sup>

The COVID-19 pandemic revealed that telehealth is a mechanism to continue to treat while protecting patients from a virus.<sup>27</sup> In a recent national survey of physical therapists and physical therapist assistants, 2% did provide telehealth services prior to the pandemic, but after the pandemic started, 48% reported providing telehealth.<sup>28</sup> Similar to other health care clinics, respondents reported that their pro bono clinics transitioned services from in person to telehealth via video platform or phone call.<sup>29-31</sup> In our study, over 50% of respondents reported transitioning their pro bono clinic to telehealth services. Despite the modifications, there was a self-reported 13.2% increase in student volunteers during the COVID-19 pandemic compared to prior to the pandemic. The reason for this increase is unclear, however, the authors hypothesize that the increase is likely due to new incoming students wanting to engage with pro-bono services. Physical therapy telehealth services still provide opportunities for SPT to apply knowledge and skills from class to clinic.<sup>4</sup> Preparing the next generation of physical therapists to be able to deliver secure, quality, and individualized therapy, education, and preventative services through telehealth will allow them to meet the growing need for telehealth services and to match the physical therapy accessibility.<sup>32-34</sup>

The strengths of this study are that respondents from all four regions (Northeast, Midwest, South, West) of the United States of America are represented in this study, and the survey was initially sent to the school and then to the students to assure that the survey was only accessible to active SPT. Another strength of the study was the VFI, a valid and reliable index, was used to describe SPT motivation to participate in physical

therapy pro bono clinics. The limitations of this study consist of the likelihood of recall bias, the disproportionate representation of respondents in all four of the regions of the United States of America, and disproportionate representation of respondents' gender. Further limitations of the study consist of small sample size, and the utilization of a volunteerism scale to analyze motivation to participate in pro bono clinics. Another limitation of this study was the non-disclosure of each respondents' program; therefore, many students of the same program may have answered the same survey.

### Conclusions

This small cross-sectional study was the first to utilize the VFI in student physical therapists to understand the motivational factors in volunteering in pro bono clinics. This study demonstrated that SPT were more motivated to volunteer based on their altruistic and humanitarian concern over career and social motivations. Over half of the SPT respondents reported changes in their pro bono service delivery due to the COVID-19 pandemic with the majority reporting the utilization of telehealth services. Future studies should use varying sampling techniques to increase a nationally represented sample of student physical therapists whether they do or do not have a pro bono clinic associated with their program. Future studies should also analyze the VFI in a national sample of physical therapists. The literature would also benefit from long term studies on the benefits or lack of benefits of pro bono physical therapy telehealth services.

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### Disclosures

The authors have no conflicts of interest to disclose.

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