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Self-perceived Well-being Among Doctor of Physical Therapy Students in the United States

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ABSTRACT

Introduction: The purpose of this study was to describe self-perceived well-being among Doctor of Physical Therapy (DPT) students in the United States during the COVID-19 pandemic and explore factors associated with well-being.

Methods: This observational study was cross-sectional, using an anonymous, self-administered, nationwide survey. The survey included questions about an array of factors theoretically related to well-being, and incorporated the WHO-5 Well-being Index, the Perceived Stress Scale-10, and the Brief Resiliency Scale.

Results: A total of 1,542 responded to the survey. Data from 1,537 DPT students in the U.S. were included in the analysis. Well-being was positively correlated with resilience (r = 0.457; $p < 0.001$), male gender ($p < 0.001$), heterosexuality ($p = 0.022$), being married ($p = 0.004$) or living with a partner or spouse ($p = 0.036$), and being physical active ($p < 0.001$). Well-being was negatively correlated with higher perceived stress (r = -0.686; $p < 0.001$), the number of friends or family who died for non-COVID reasons during the prior year ($p = 0.005$), food insecurity ($p < 0.001$), having chronic pain ($p < 0.001$), more days absent from school ($p = 0.021$), and being a first-generation college student ($p = 0.007$). Surprisingly, COVID-19 infection status and having at least one close friend or relative die of COVID-19 were not correlated with self-perceived wellness. Regression modeling using individual factors found that being male ($p < 0.001$), married ($p = 0.046$), and physically active ($p < 0.001$) were positive predictors of well-being, while having food insecurity ($p < 0.001$) and chronic pain ($p < 0.001$) were negative predictors.

Conclusion: Among DPT students in the U.S., self-perceived well-being is negatively correlated with higher perceived stress; while concurrently being positively correlated with resilience. Well-being is partially predicted by modifiable factors including physical activity, chronic pain and food insecurity. Our findings deepen the understanding of DPT students' well-being and can help inform the services and resources provided by colleges and universities to better address modifiable factors that are predictive of well-being among DPT students.

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INTRODUCTION

Prior to the COVID-19 pandemic, studies of graduate students found that more than a third reported high levels of stress that interfered with their academic performance and overall well-being [1, 2]. Self-reported depression and anxiety were six times higher than the general population [3]. Among health professions students, 41% reported symptoms of depression and 28% reported symptoms of anxiety [4]. In 2017, over 30% of physical and occupational therapy students were found to have moderate, severe, or extremely severe levels of stress, anxiety or depression and among those with moderate to high levels of stress, 88% reported moderate or high levels of depression and 69% reported moderate or high levels of anxiety [5]. Not surprisingly, the pandemic has exacerbated the mental health struggles and well-being of college and graduate students. College students have exhibited greater anxiety, depression, and stress [6, 7]. In a 2020 survey of approximately 3,500 graduate students at 12 public research universities in the United States (U.S.), more than two-thirds received a low score on questions evaluating mental well-being, and a third reported symptoms of post-traumatic stress disorder (PTSD) or moderate to high levels of anxiety, depression, and stress [8, 9]. Medical students in India were found to have high rates of depression and anxiety [10]. Quarantine was found to decrease overall performance and cause feelings of emotional detachment among medical students in Saudi Arabia [11]. A study of medical students in China reported COVID-19 related psychological distress and acute stress reactions were common [12]. A survey of medical students in the U.S. found declines in overall wellness and individual wellness dimensions during the COVID-19 pandemic [13]. Close to 25% of graduate nursing students demonstrated moderate to severe negative emotional states, with a similar

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number having scores suggesting clinical concern for post-traumatic stress disorder [14]. Other research has found that positive factors such as social and faculty support [15], a positive departmental social climate, optimism about their career prospects and a perceived good work-life balance are associated with better mental health outcomes [3, 16].

In light of the similar rigorous training demands and exposure to patients with a range of illnesses, it is reasonable to predict that healthcare students in disciplines beyond nursing and medicine also experienced heightened mental health challenges during the pandemic. In a survey conducted in October 2020, Smith and colleagues found more than a third of Doctor of Physical Therapy (DPT) students had high levels of burnout, which was predicted by perceived stress and resiliency [17].

The purpose of this study was to describe self-perceived well-being among DPT students in the U.S. and explore personal factors that could be associated with well-being. We hypothesized that well-being would be:

1. negatively correlated with perceived stress and positively correlated with resilience,
2. negatively correlated with factors known to affect mental health, such as chronic pain or food insecurity,
3. partially predicted by prior factors known to affect mental health [18-20].

METHODS

Study Design

This study used a cross-sectional design and an anonymous self-administered nationwide survey. This study was approved by the Institutional Review Board of Rutgers, The State University of New Jersey (Pro2021000754). All participants provided informed consent that was built into the online survey.

Participants

Participants were DPT students enrolled in a program in the U.S. between September 14, 2021, and October 31, 2021. They were contacted and invited to participate by their respective program director or chairperson.

Procedures

Program directors or chairpersons of DPT programs in the United States listed with the American Physical Therapy Association (APTA) (https://www.apta.org) were contacted via email in mid-September of 2021 and invited to share the information about the survey with their currently enrolled DPT students. The information forwarded to students by their program director or chairperson included an invitation to participate in an online anonymous survey using the Rutgers University Qualtrics platform (http://rutgers.qualtrics.com). Eligibility was determined by a survey item that asked the student if they were currently enrolled in a DPT program in the United States. Eligible participants then provided consent by clicking on an icon at the bottom of the consent form that was embedded within the online survey. The consent form notified participants that they could skip any questions that made them feel uncomfortable or withdraw from completing the survey at any time. Upon finishing the survey items, participants had the option of clicking on a link to a different survey to enter a raffle to win one of three $50 gift cards. The survey ended October 31, 2021.

Tools

To understand factors that may affect the well-being of DPT students, the survey, developed by a consensus of the authors, included customized questions about demographics (including race, ethnicity, immigrant status, and first generation college student status), lifestyle, living situation, and health (including chronic pain and personal COVID-19 experiences) [21, 22]. Knowing that socioeconomic factors can affect health and well-being in young adults and college students, we included custom questions specific to food insecurity and student-loan debt. [18, 19, 23, 24]. The survey incorporated standardized self-report instruments to obtain scores for self-perceived wellness (WHO-5 Well-being Index), stress (Perceived Stress Scale-10), and resilience (Brief Resilience Scale). The Perceived Stress Scale-10 (PSS-10) and the Brief Resilience Scale (BRS) were included in this study based on the potential association between stress (a negative psychological construct) and resilience (a positive psychological construct) with well-being.

The WHO-5 Well-being Index is among the most widely used tools to assess subjective psychological well-being. It has well-established validity and reliability [25-27]. It consists of 5 items, each scored between 0 and 5. The score is calculated by totaling raw points and converting to a score ranging from 0 to 100, with a score of 100 indicative of the highest amount of well-being, and 0 indicating the lowest. An imputed value based on the average score of 4 items answered was used to replace a missing item score for participants who skipped 1 of the 5 items. Data from participants who skipped 2 or more of the 5 items was not used in the analysis. The scores from the WHO-5 Well-being Index served as the main variable in our analysis.

The Perceived Stress Scale-10 (PSS-10) is one of the most widely used instruments for measuring self-perceived stress [28]. It consists of 10 questions each scored from 0 to 4 based on the occurrence of feelings and reactions over the past month. The PSS-10 score is calculated by totaling the points from each item and generating a score ranging from 0 to 40. An imputed value based on the average score of the items answered was used to replace missing item scores for participants who skipped 1 or 2 items. Data from participants who skipped 3 or more of the 10 items were not used in the analysis. The PSS-10 has been shown to have acceptable validity and reliability in multiple studies [29].

The Brief Resilience Scale (BRS) consists of 6 items [30]. The score is calculated by totaling the raw points and dividing by the number of items answered. Thus, the scoring process automatically resolves any missing values. The BRS generates a score ranging from 1 to 5, with a score of 5 indicating the highest amount of self-perceived resilience and 1 indicating the lowest. The BRS has been shown to have favorable validity [31].

Data Analysis

SPSS Statistics 27 was used for the data analysis. Descriptive statistics were calculated for all study variables. Pearson correlations were conducted between WHO-5 scores and all other variables (PSS-10 scores, BRS scores, and all individual personal

characteristics). The significance level for correlations between a variable to the main outcome variable (WHO-5 score) was ≤ 0.5. Individual variables with a significant correlation with WHO-5 scores were then included as potential predictors in the multiple regression analysis. Although PSS-10 and BRS scores were correlated significantly with WHO-5 scores, we did not include them in the regression model because of the co-linearity between PSS-10 scores and WHO-5 scores, and between BRS scores and WHO-5 scores. Furthermore, we did not include variables if the proportion of respondents fitting the characteristic was <10%.

RESULTS

Between September 2021 and October 2021, 1,542 students from across 33 states (of the 49 states and U.S. territories with DPT programs) completed the survey. This represents a conservative estimate of about 4.2% of the 36,841 total U.S. DPT students enrolled in 2020-2021 [32]. No responses were received from students in 17 states or territories with DPT programs, suggesting that, at least in some cases, some program directors or chairpersons did not forward the survey invitation to their students. Thus, the number of students invited to participate was likely substantially lower than the total number of students across the country, and thus, our actual response rate was likely higher than 4.2%. Five respondents were not enrolled in a DPT program at the time of the survey and their data were eliminated from the data set. Analysis was conducted on 1,537 participants. The number of respondents from individual states or territories ranged from 0 – 108.

Demographic characteristics of the participants are summarized in **Table 1**. The majority of respondents identified as "cisgender female" (74.4%) and "straight or heterosexual" (90%). White was the race identified by 82.8%, and 91.8% selected non-Hispanic as their ethnicity. Slightly over 20% reported that they were a first-generation college student.

Social, lifestyle and health characteristics are summarized in **Table 2**. Sixty-one percent reported that they are either married or in a long-term relationship, and 84.6% indicated that they live with others (family, friends, roommates, partner or spouse). Of the respondents, 9.7% reported living with someone who has a disability or chronic health condition. Sixteen percent reported having marginal, low, or very low food security. Twelve percent reported having chronic pain, and 22.8% reported having had COVID-19 (as of September/October of 2021).

Table 1: Demographic Characteristics

Characteristic	Number of responses	N (%) unless otherwise noted
Age (years)	1264	Mean: 24.4 (SD: 3.14; range: 20-56)
Gender	1443	
Cisgender male		345 (23.9%)
Cisgender female		1073 (74.4%)
Transgender male		0
Transgender female		0
Non-binary or gender non-conforming		10 (0.69%)
Other		5 (0.35%)
Prefer not to say		10 (0.69%)
Sexuality	1443	
Gay or Lesbian		40 (2.8%)
Straight or Heterosexual		1313 (90%)
Bi-sexual		65 (4.5%)
Asexual		4 (0.3%)
Other		7 (0.5%)
Prefer not to say		14 (1.0%)
Ethnicity	1440	
Hispanic		118 (8.2%)
Non-Hispanic		1322 (91.8%)
Race	1468	
African American or Black		50 (3.4%)
Asian or Pacific Islander		147 (10.0%)
Native American or Alaska Native		9 (0.6%)
White		1215 (82.8%)
Other or Mixed		47 (3.2%)
Immigrant	1443	70 (4.6%)
English as a Second Language	1445	87 (6.0%)
First generation college student	1429	297 (20.8%)

Table 2: Social, Lifestyle and Health Characteristics

Characteristic	Number of responses	n (%) unless otherwise noted
Relationship Status	1446	
Single		561 (38.8%)
Long-term (not married)		682 (47.2%)
Married		203 (14.0%)
Parent	1446	45 (3.1%)
Living Situation	1437	
Alone		212 (14.8%)
With family		320 (22.3%)
With friends or roommates		519 (36.1%)
With partner or spouse		377 (26.2%)
Without housing or homeless		0
Other		9 (0.6%)
Living with someone who has a disability or chronic health concern	1437	139 (9.7%)
Amount of moderate and/or vigorous physical activity per week	1438	
<60 minutes		283 (19.7%)
60 – 150 minutes		488 (33.9%)
>150 minutes		667 (46.4%)
Working a job	1429	519 (36.3%)
Food security	1438	
High		1207 (83.9%)
Marginal		181 (12.6%)
Low		40 (2.8%)
Very low		10 (0.7%)
Living with a physical disability	1436	27 (1.9%)
Living with learning disability	1428	101 (7.1%)
Living with chronic pain	1437	172 (12.0%)
Had COVID-19 (through Sept. 2021)	1433	327 (22.8%)
Number of close friends or relatives who had COVID-19 (through Sept. 2021)	1397	Mean: 5.52 (SD: 5.35) Range: 0-50
Number of close friends or relatives died from COVID-19 (through Sept. 2021)	1430	Mean: 0.25 (SD: 0.84) Range: 0-20
Number of close friends or relatives died from reason(s) other than COVID-19 (through Sept. 2021)	1423	Mean: 0.62 (SD: 0.98) Range: 0-8

WHO-5 (well-being), PSS-10 (stress) and BRS (resilience) scores are summarized in **Table 3**. Respondents reporting a wide range of well-being, ranging from very low (4) to very high (100), with the mean score (48.15) falling in the middle of the possible range of scores. Inspecting the proportions of respondents' well-being scores by quartile, 324 respondents (23.3%) fell into the 1st quartile (i.e., the lowest amount of well-being) and 613 respondents (44.2%) were in the combined 1st and 2nd quartiles of WHO-5 scores. Higher resilience scores from the BRS were significantly correlated with well-being ($p < 0.001$). Higher PSS-10 scores (i.e., higher levels of perceived stress) were significantly negatively correlated with well-being ($p < 0.001$).

Correlations statistics for t demographic, lifestyle, health and social variables that had a significant correlation to WHO-5 scores are provided in **Table 4**. Not shown are variables that did not have a significant correlation and those that were reported by < 10% of sample. Variables showing a strong positive correlation to well-being were being cisgender male, heterosexual, married or living with a partner or spouse, being physically active, and having food security. The variables with a strong negative correlation to well-being were a higher number of close friends or relatives dying (not due to COVID), having chronic pain, a higher number of days absent from school, and being a first-generation college student. These variables were included in the regression analysis. Interestingly, although close to 30% of respondents reported having had COVID-19 themselves and 16% reported that at least one close friend or relative died of COVID-19, these factors were not correlated with self-perceived wellness scores.

Table 5 summarizes the regression analysis that was performed to predict WHO-5 scores. The variables that were predictive of higher well-being scores were being male, married, and physically active. The variables that were predictive of lower well-being scores were having chronic pain and food insecurity.

Table 3: WHO-5 Well-being Index[a], Perceived Stress Scale (PSS-10)[b], and Brief Resilience Scale (BRS)[c] Scores and Correlations

Index	Number included in analysis	Mean Score (SD)	Median Score	Range of reported scores	Pearson (r) correlation to WHO-5 score
WHO-5	1388	48.15 (17.82)	48	4-100	1
BRS	1375	3.44 (0.73)	3.50	1 – 5	0.457 ($p < 0.001$)
PSS-10	1365	18.32 (6.32)	18.0	0 – 38	-0.686 ($p < 0.001$)

[a]WHO-5 range = 0-100 with 100 indicative of the highest amount of well-being, and 0 indicating the lowest.
[b] PSS-10 range 0 to 40, with higher scores indicating higher levels of perceived stress
[c] BRS range = 1 to 5 with a score of 5 indicating the highest amount of self-perceived resilience and 1 indicating the lowest

Table 4: Demographic, lifestyle, health, social variables with significant correlations to WHO-5 scores

Gender: cisgender male	Pearson correlation ®	0.178
	Significance (2-tailed)	< 0.001
	n	1358
Sexuality: heterosexual	Pearson correlation (r)	0.062
	Significance (2-tailed)	0.022
	n	1378
Number of friends or relatives who died (non-COVID)	Pearson correlation (r)	-0.075
	Significance (2-tailed)	0.005
	n	1379
Married	Pearson correlation (r)	0.078
	Significance (2-tailed)	0.004
	n	1388
Living with partner or spouse	Pearson correlation (r)	0.056
	Significance (2-tailed)	0.036
	n	1379
Physically active	Pearson correlation (r)	0.307
	Significance (2-tailed)	< 0.001
	n	1388
Food security	Pearson correlation (r)	0.177
	Significance (2-tailed)	< 0.001
	n	1388
Chronic pain	Pearson correlation (r)	-0.159
	Significance (2-tailed)	< 0.001
	n	1388
Number of days absent (past year)	Pearson correlation (r)	-0.062
	Significance (2-tailed)	0.021
	n	1365

Table 5: Regression analysis results to determine predictors of WHO-5 score[a]

	Unstandardized coefficient Beta	Unstandardized coefficient Std. Error	Standardized coefficient Beta	t	Significance
Gender: cisgender male	4.406	1.096	0.105	4.019	< 0.001
Sexuality: heterosexual	1.822	1.692	0.028	1.077	0.282
Number of friends or relatives who died (non-COVID)	-0.707	0.470	-0.039	-1.504	0.133
Married	3.213	1.611	0.062	1.994	0.046
Living with partner or spouse	1.471	1.254	0.036	1.174	0.241
Physically active	6.229	0.608	0.267	10.237	< 0.001
Food secure	6.938	1.272	0.140	5.454	< 0.001
Chronic pain	-6.487	1.399	-0.120	-4.635	< 0.001
Number of days absent (past year)	-0.087	0.105	-0.021	-0.829	0.407
First generation college student	-1.834	1.138	-0.041	-1.612	0.107

DISCUSSION

Our findings support our hypothesis that self-perceived well-being of DPT students in the U.S. is positively correlated with resilience and negatively correlated with stress. Previous studies have shown that self-appraised stress, as measured by the PSS-10, is a factor in high levels of burnout in DPT students and physical therapists [17, 33]. In our sample, 15.9% of the participants scored 25 points or higher on the PSS-10, on the PSS-10, a score suggesting a relatively high level of stress. The proportion of students with lower well-being scores in the combined 1st and 2nd quartiles (44.2%) suggest that an alarming number of DPT students in our sample have less than optimal well-being. In addition to perceived stress being associated with burnout, Richardson et al. found that high stress was a predictor variable in maladaptive perfectionism in DPT students [34]. These findings suggest that students may need services or resources that promote and enhance

well-being, such as stress management training or development of resilience strategies. Program administrators and faculty need to be aware that although DPT students are typically academically strong, many present with behavioral health challenges including high stress and low resilience. Research has found that positive factors such as social support, a positive departmental social climate, optimism about their career prospects and a perceived good work-life balance are associated with better mental health outcomes among graduate students [3, 16]. Our findings about DPT students' wellness suggests a need for programming and resources that foster empathy and support among students, faculty, staff, and administrators. Studies have suggested an array of strategies to enhance wellness in medical and DPT students, however, they have not been systematically introduced into the training of healthcare professionals [35, 36].

It is important that DPT program administrators and faculty be aware that students may need wellness services or counseling at any time throughout the curriculum and that they may require assistance in accessing such services and resources. This is fitting with the physical therapy profession's desire to optimize the human experience and promote health and well-being. Simply stated, educators need to take care of students and encourage self-care so that they can grow into professionals who can take care of others.

Furthermore, we found that modifiable and non-modifiable factors can help predict well-being. Greater well-being was partially predicted by being cisgender male, being married, being physically active, and having food security. Lower well-being scores were partially predicted by having chronic pain. While gender expression and marital status are highly personal choices, the other predictive factors in the model warrant discussion of opportunities to modify and improve.

Approximately half of the respondents (46.4%) reported getting more than 150 minutes of moderate of vigorous physical activity per week. About a 5th of the sample (19.7%) reported getting less than 60 minutes of moderate or vigorous physical activity per week, suggesting that at least 1 in 5 DPT students is under-exercised, based on current guidelines that recommend a minimum of 75 minutes/week of vigorous or combined vigorous/moderate exercise or 150 minutes/week of moderate exercise, along with muscle-strengthening activities on 2 or more days a week [37]. That, coupled with our finding that being physically active is a predictor of well-being, suggests that DPT students should be encouraged to attain the recommended minimum amount of physical activity per week. Meeting the recommended amount of physical activity can be a challenge, given rigorous academic schedules that may require long hours of sitting. Program administration, faculty, and students themselves should consider creating opportunities and resources for exercise, such as access to a campus gym, scheduling exercise breaks, offering movement-based activities, and education on the benefits of physical activity and the hazards of a sedentary lifestyle. Our finding that physical activity is a significant factor in DPT student well-being should be shared with students, which may provide a motivator for them to exercise.

The combined proportion of students reporting marginal, low, or very low food security was 16%. Food insecurity can negatively affect the ability to focus—thus reflecting lower grade point averages among college students, while concurrently being associated with mental health concerns [19, 24]. To support students who have food insecurity, colleges and universities must develop strategies to ameliorate food insecurity in ways that avoid bias and stigma. Strategies may include providing information about food support and/or developing food pantries that offer a variety of food choices including fresh produce, while maintaining anonymity among beneficiaries. Another opportunity may be to enhance cafeteria access and privileges for students who are in need.

Of the DPT students who responded to the survey, 12% indicated that they are living with chronic pain. This is consistent with other studies of chronic pain in young adults, although lower than reported in the general US adult population [20, 38]. Unfortunately, more than half of young people with chronic pain continue to experience pain through adulthood [39, 40]. In addition, young adulthood is a time when vulnerabilities such as depression, anxiety, and substance misuse often emerge—which are likely exacerbated by pain, further challenging academic success and a transition to full-time work [41-43]. As the prevalence of mental health disorders and concerns among young adults and college students continues to increase, especially considering the COVID-19 pandemic, it is imperative that colleges and universities seek ways to provide and expand mental health services that are inclusive of chronic pain management. In addition to counseling services, DPT programs should acknowledge that many students have chronic pain. Programs should ensure adequate pain science education, inclusive of information on evidence-based approaches in managing chronic pain that reflect the best practices of integrative and trauma-informed care.

Although not significant predictors in the regression model, there were two other factors that significantly correlated with well-being. The negative correlation between well-being and the number of family and friends who died over the prior year suggests that student support services should include the availability of grief counseling. The negative correlation between well-being and first-generation college student status suggests that the availability of support services for 1st generation college students, such as mentoring or coaching, may be helpful. Because 1.9% of DPT students reported having a physical disability and 7.1% reported a learning disability, it is additionally important that faculty and program directors are trained to direct such students to their school's office of accessibility resources / disability services to explore the need and feasibility of accommodations.

Nearly 83% of the respondents identified as White, while 3.4% were Black and 8.2% were Hispanic. Coupled with data from the Commission on Accreditation in Physical Therapy Education (CAPTE) that reported the ethnicity of PT graduates in 2021 was 3.2% Black and 6.7% Hispanic/Latino [32], it is clear that race and ethnicity representation in DPT programs in the U.S. does not match the general U.S. population which is 13.4% Black and 18.5% Hispanic [44]. Although race and ethnicity did not correlate nor predict well-being, the relatively low numbers of persons of color suggests that DPT programs should consider recruitment strategies to promote a physical therapy workforce that better reflects the populations served.

LIMITATIONS

Potential biases include the possibility that the topic of the survey may have been more appealing to students with either high or low self-perceived wellness, which may have resulted in selection bias. Because respondents were asked to identify only the state or territory in which they are attending school, we are unable to determine the proportion of the DPT programs in the United States that participated. Although we had a high number of participants from 33 states, no responses were received from students in programs located in 15 states and 2 territories that have DPT programs, thus creating some risk of sampling and possible regional bias in the results. Although we had a large number of respondents, it is possible that our results may be skewed because some programs did not participate. In particular, clustered areas with no participation included portions of the southwest U.S. (Arizona, New Mexico, and Utah) and central regions (South Dakota, Nebraska, Kansas, and Iowa). Because invitations to participate were forwarded to students through DPT program directors and chairs, and because we did not follow up with program directors and chairs to ask if they had shared the survey invitation to their DPT students, we do not know how many students received the invitation, and thus we do not know the actual response rate. Based on the raw number of respondents, we estimate that the sample reflects approximately 4.2% of the total number of DPT students. Because we suspect that not all students received the invitation to participate, our actual response rate to the survey was likely higher than 4.2%. The large number of responses we received (1,542) may mitigate potential bias related to the response rate.

The proportion of respondents identifying as female was 12% higher than the proportion of female reported by CAPTE in 2020 (74.4% in our sample compared to 62.1% reported by CAPTE) [32]. This may have introduced some gender bias since the gender distribution in our sample did not match the nationwide estimates.

Although our survey included a wide array of potential factors related to well-being, there are other factors that may contribute to well-being that were not included, such as smoking, drug or alcohol use, domestic violence, past trauma, or having experienced harassment or discrimination. Because we do not have pre-pandemic data available on DPT students, we cannot determine if self-perceived wellness was adversely affected by COVID-19. Although close to 30% of respondents reported having had COVID-19 themselves and 16% reported that at least one close friend or relative died of COVID-19, those factors were surprisingly not correlated with self-perceived wellness scores generated at the time the survey was completed, perhaps due to recovery or the passage of time since the event.

CONCLUSION

Among DPT students in the U.S., self-perceived well-being is negatively correlated with perceived stress and positively correlated with resilience. Well-being is partially predicted by chronic pain, food insecurity, and physical activity, all of which may be modifiable in many cases. Our findings can be used by DPT programs to more fully understand the scope and factors related to well-being of DPT students and can help inform services and resources that are conducive to enhancement of stress management skills, resilience, and overall well-being.

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