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A Model for Teaching Financial Literacy in a Doctor of Physical Therapy Program Using the Five Stages of Career Development

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Abstract

Purpose: The cost of higher education programs across allied health disciplines have increased substantially in recent years while salaries have remained relatively stagnant. The result of which is an increase in debt burden for graduates of allied health professional programs. One possible intervention to improve the experience of graduates is to improve financial literacy; however, research on the effectiveness of financial literacy education in higher education is scant. Therefore, the purpose of this study was to understand the effectiveness of a financial literacy and career planning seminar in a Doctor of Physical Therapy (DPT) program. Specifically, this study aimed to (1) describe the implementation of a novel career planning and financial literacy workshop as an additional component of a required physical therapy administration course in a DPT program, and to (2) understand the outcomes and effectiveness of the model utilized. **Methods:** This study included a single cohort pre/post design and between subject analysis. DPT students completed a pre- and post-survey before and after attending a 1-hour asynchronous career planning and financial literacy workshop. The survey included questions to capture students' knowledge and confidence in financial literacy. **Results:** Overall, 80 DPT students completed the pre-survey and 54 DPT students completed the post-survey. The group of 55 participants that completed the post-workshop knowledge portion of the survey (M=87%, SD 220.72) demonstrated significantly better knowledge scores $t(124) = 7.44, p < .05$ compared to the group of 77 participants that completed the pre-workshop knowledge portion of the survey (M = 67%, SD 282.31). The group of 53 participants that completed the post-workshop confidence portion of the survey (M=35.79%, SD 27.09) demonstrated significantly improved confidence on the post-workshop survey $t(130) = 2.75, p < .05$ compared to the group of 79 participants that completed the pre-workshop confidence portion of the survey (M = 32.62, SD 64.57). **Conclusion:** A 1-hour workshop can be effective at improving knowledge and confidence in financial literacy of DPT students, and it can be implemented in existing DPT curricula without considerable time or added credit hours.

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ABSTRACT

Purpose: The cost of higher education programs across allied health disciplines have increased substantially in recent years while salaries have remained relatively stagnant. The result of which is an increase in debt burden for graduates of allied health professional programs. One possible intervention to improve the experience of graduates is to improve financial literacy; however, research on the effectiveness of financial literacy education in higher education is scant. Therefore, the purpose of this study was to understand the effectiveness of a financial literacy and career planning seminar in a Doctor of Physical Therapy (DPT) program. Specifically, this study aimed to (1) describe the implementation of a novel career planning and financial literacy workshop as an additional component of a required physical therapy administration course in a DPT program, and to (2) understand the outcomes and effectiveness of the model utilized. **Methods:** This study included a single cohort pre/post design and between subject analysis. DPT students completed a pre- and post-survey before and after attending a 1-hour asynchronous career planning and financial literacy workshop. The survey included questions to capture students' knowledge and confidence in financial literacy. **Results:** Overall, 80 DPT students completed the pre-survey and 54 DPT students completed the post-survey. The group of 55 participants that completed the post-workshop knowledge portion of the survey (M=87%, SD 220.72) demonstrated significantly better knowledge scores $t(124) = 7.44, p < .05$ compared to the group of 77 participants that completed the pre-workshop knowledge portion of the survey (M = 67%, SD 282.31). The group of 53 participants that completed the post-workshop confidence portion of the survey (M=35.79%, SD 27.09) demonstrated significantly improved confidence on the post-workshop survey $t(130) = 2.75, p < .05$ compared to the group of 79 participants that completed the pre-workshop confidence portion of the survey (M = 32.62, SD 64.57). **Conclusion:** A 1-hour workshop can be effective at improving knowledge and confidence in financial literacy of DPT students, and it can be implemented in existing DPT curricula without considerable time or added credit hours.

Keywords: financial literacy, DPT education, student debt, student loans, repayment, career planning

INTRODUCTION

Higher education programs across disciplines have been negatively affected by widespread tuition hikes and increased fees due in part to reduced federal support for educational institutions.¹ The rise in tuition costs for graduate programs is exacerbated by reduced federal support for graduate student loans. In 2012, subsidized loans for graduate level education were phased out due to the Budget Control Act of 2011.² New graduate physical therapists are likely to encounter challenges related to student loan debt. Nearly 93% of recent physical therapy graduates have an average of \$153,882 for all debt not including mortgages and the average loan amount attributed to physical therapy debt alone is \$116,183.³

Despite the increased cost of tuition and reduced federal support for graduate education, physical therapy salaries have remained relatively stagnant. Between 2007 and 2016, the compound annual growth rate of salaries for physical therapists was 2.02%, which was lower than other health care professionals.⁴ In addition, recent changes to Medicare funding have contributed to the stagnation of wages. For example, while there has not been rigorous research on the topic, the 2022 Medicare Physician Fee Schedule Rule, which reduced reimbursement for outpatient therapy services and implemented a payment differential for services delivered by physical therapist assistants, has anecdotally reduced reimbursement and reduced the ability for organizations to pay physical therapists and staff.^{5,6}

The combination of increased educational cost, decreased federal support, and stagnant wages has led to student loan debt concerns across health professions and specifically within physical therapy. In a study comparing average entry level salaries with student loan debt for health professionals, researchers determined that for early career professionals with a Doctor of Physical Therapy (DPT) degree, those with a debt level of \$80,000 or less would be considered acceptable when using a standard of 15% of their monthly income going towards loan repayment. However, with a debt level of \$120,000 or more in loans, individuals would be considered on hardship status for those with a DPT.⁷ Similarly, in a study evaluating the net present value (NPV), which compares the benefit or lifetime salary to be gained compared to the cost needed to enter a career, physical therapists graduating with the average debt amount of \$86,563 had higher NPV than occupational therapists, optometrists, veterinarians, and chiropractors.⁸ However, at \$150,000 in debt, physical therapy falls below most other careers, and at more than \$200,000 in debt, borrowers may not reach repayment benchmarks. Student loan debt across disciplines has been found to affect borrowers' ability to meet life milestones, such as buying a home or pursuing higher education, and it also negatively impacts mental health.⁹ Student loan debt has also affected the choice of practice setting for recent graduates.¹⁰ The financial burden of student debt was exacerbated by the COVID-19 pandemic with higher levels of financial burden being reported by African Americans compared to Caucasians. In addition, Asian/Pacific Islanders, African Americans, and Hispanics reported higher difficulty purchasing food compared to Caucasians.¹¹

The concern over student debt in physical therapy increased to the point where in 2016, the American Physical Therapy Association (APTA) House of Delegates passed RC 11-16, charging the APTA Board of Directors to develop a plan to address debt in physical therapy education.¹² As a result, APTA developed the Financial Solutions Center, which includes financial education resources and a partnership with Laurel Road, a financial institution that offers loan refinancing services.¹³ In 2020, APTA released a report on the impact of student debt in the physical therapy profession.³ The report details substantial negative impacts of student loan debt, which include debt limiting career choices, and physical therapists delaying post professional education. In addition, certain segments of the population are more burdened by debt, including those that were non-white, those with lower household incomes, and those with financial dependents. The report also highlights that there is no clear path to becoming debt-free and that one of the recommended next steps was to engage in further research on the topic.³

There remains a paucity of research in this area since the publication of this report and existing literature tends to focus on the problems related to debt. One study surveyed multiple cohorts of graduates to determine the importance of job characteristics for those with and without debt and surprisingly found that students with debt did not value employer financial incentives more than those without debt.¹⁴ Another study surveyed 86 recent DPT graduates in the state of Florida and found that 57% of participants reported that debt affected their overall job choice.¹⁰ In a large national survey study that included 733 final year DPT students, 75.1% of participants would not meet the 10-year loan repayment guidelines to keep debt payments less than 15% of income, and 38.7% would not meet the 25-year loan repayment guidelines. The study also found no significant difference in debt levels between students that did and did not receive debt education.⁴ One recent mixed-methods study investigated the impacts of student loan debt five years after graduation and found that physical therapists were impacted personally, professionally, and psychologically by student loan debt.¹⁵

Financial Literacy Education

Researchers and academicians discuss the need for delivering educational content to address these deficits, such as financial literacy courses within the DPT curriculum.^{16,17} Others have also suggested the need to advocate for increased scholarship funding, debt forgiveness programs, and adjustments to loan repayment programs.¹⁸

Financial literacy is operationally defined as it is by the National Financial Educators Council as “possessing the skills and knowledge on financial matters to confidently take effective action that best fulfills an individual’s personal, family, and global community goals.”¹⁹ Physical therapy programs must meet standard required elements defined by the Commission on Accreditation in Physical Therapy Education (CAPTE) in order to achieve and maintain accreditation.^{20,21} One of the major requirements states that employment rates averaged over two years must be at least 90% for each graduated cohort.¹⁹ While the employment rate requirement is one of the major standards, the accreditation guidelines do not specify to what extent career planning curricular content be included in each program. The CAPTE accreditation standards state that the institution must describe how job and career opportunities are communicated to students, and the institution must identify career development and lifelong learning opportunities.²⁰ In addition, while the guidelines state that financial aid information must be shared and available for students, there is no requirement to include financial literacy content in the curriculum.²⁰

The Commission on Pathways Through Graduate Schools and into Careers describes a disconnect in graduate school preparation in that universities play a critical role in helping students find pathways to careers, but that graduate deans perceive students as not very knowledgeable about career options even at the end of the degree program. The Commission concludes that universities should make connections with students, connect students with alumni, and broaden the focus of graduate education to include the development of professional skills to take advantage of various career options.²² Similarly, research suggests that physical therapists report being unprepared for employment after graduation.²³

The impact of professional or career development programs has been studied in graduate schools and healthcare institutions previously. Early results from a study investigating the effects of a field seminar to prepare Master of Social Work students for employment showed students found mock interviews particularly useful.²⁴ A study investigating the effects of a guest speaker professional development seminar series implemented in a Doctor of Pharmacy program found the program enhanced student learning related to career options and professional development. Authors also report that the series presented material that exceeded the curricular requirements but was performed in such a way to maximize time by providing career advising to many students at the same time.²⁵

While there is precedent for studying career development initiatives in other graduate disciplines, published evidence into its implementation within a DPT program is scant. St. Francis University has incorporated financial literacy into its curriculum including the development of a personal budget, discussing loan repayment options, and lectures focusing on financial planning.¹⁷ In a recent national survey on student loan debt accrued by DPT students, on average, students that had debt management education as part of their curriculum had on average \$3,530 less student debt and \$570 less credit card debt compared to students that did not have this component as part of their education.⁴ However, physical therapy education is already costly and time-consuming; therefore, additional curricular components should be examined carefully to ensure that they are absolutely necessary for development of the DPT clinician.³

No study to date has evaluated the effectiveness of a financial literacy within a DPT program. Therefore, the purpose of this study was to assess the effectiveness of a financial literacy and career planning seminar in a DPT program. Specifically, this study aimed to (1) describe the implementation of a novel career planning and financial literacy workshop as an optional component of a required physical therapy administration course in a DPT program, and to (2) review the outcomes and assess the effectiveness of the model utilized.

METHODS

Pilot

A one-hour workshop was created and piloted following the five-stages model of career planning.^{26,27} Following IRB approval, the workshop was piloted over two consecutive trimesters to three cohorts of students (one from the flexible DPT curriculum and one from the residential curriculum) from one CAPTE accredited DPT program. Following the first pilot, informal feedback was collected from students regarding content and delivery. During the second pilot workshop, formal feedback from a pre- and post-survey was collected and this was used to improve the content and delivery of the workshop method presented in this study. Most notably during the second pilot, students reported wishing they could attend the workshop asynchronously, so the next workshop was redesigned to be delivered asynchronously for this study. This workshop was then made available over three trimesters with a pre- and post-survey to gauge effectiveness of the content and asynchronous model of delivery.

Workshop Design

The 5-stage model of career planning is a commonly used model in the field of career planning and career counseling and was the framework utilized to develop and implement the workshop. Table 1 outlines the major lesson plan components of the workshop using the 5-stage model. At each stage of the workshop, students were given information, examples, or templates and then completed a short active engagement activity. Elements of financial education and literacy related to physical therapy were included in the course using materials and methods described in the APTA Financial Solutions Toolkit for Faculty.²⁸ For example, students were taught how to evaluate their financial situation to determine their salary requirements and the type of setting that might be most appropriate for work post-graduation given their social situation.

Table 1: Lesson Plan Components of Financial Literacy Workshop

Stage I: Assessment
Learners actively reflect on their goals for their first job.
Learners are guided through an assessment activity of listing ideal job components and setting priorities.
Learners are taught how to take stock of their financial situation and consider this when choosing a setting.
Stage II: Exploration
Content focuses on how setting and jobs in physical therapy differ by opportunities and payment structures.
Learners practice exploring available jobs and salary options through search engines and career websites.
Stage III: Preparation
Learners are given templates for resumes, CVs, reference lists, and interview preparation skills.
Learners are given a worksheet for financial planning and budgeting.
Stage IV: Implementation
Learners complete a financial planning worksheet assignment after the workshop.
Stage V: Decision Making
Learners are given case study examples of physical therapists and the career choices they have made due to the financial needs and career goals.

Instrumentation

The effects of the workshop were evaluated using pre and post workshop surveys that assessed two main concepts: (1) knowledge of career planning and financial literacy in physical therapy, and (2) confidence in career planning and financial literacy in physical therapy. The survey for this theory-based novel educational workshop was created using concepts from the International Network on Financial Education Measuring Financial Literacy,²⁹ career self-efficacy,^{30,31} and practice knowledge of the landscape of physical therapy jobs and career options. Survey questions used a combination of a 5-point Likert Scale, multiple choice, true/false, and matching questions.^{32,33} The complete survey is in Appendix A.

Participants

Participants were students enrolled in the Administration and Management course at any one of five campuses and in either the flexible or residential DPT programs at one university. The Administration and Management course was chosen because the course content includes financial components of physical therapy practice. The course is offered in the 5th trimester of the 8-term residential program and the 9th trimester of the 12-term flexible (hybrid) program.

RESULTS

Participants

Eighty (80) participants completed the pre-survey, and 54 students completed the post-survey. Demographic data of the students completing the pre-survey are shown in Table 2.

Eleven percent (11%) of participants did not have loans, while 59% had federal loans, 2% had private loans, and 27% had a combination of federal and private loans. 69% of participants reported that they understood the terms of their loans. 95% reported working in some capacity prior to starting physical therapy school with 32% reporting working during physical therapy school.

Table 2. Demographics of Participants

Demographic	N	%
Gender Identity	N (78)	
Male	33	42.31%
Female	44	56.41%
Other	1	1.28%

Demographic	N	%
Race	N (77)	
Hispanic, Latino, or Spanish	12	15.58%
Black or African American	7	9.09%
American Indian or Alaskan Native	1	1.30%
Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese, or other Asian	12	15.58%
White	41	53.25%
Native Hawaiian, Somoan, Chamorro, or Other Pacific Islander	1	1.30%
Prefer not to say	3	3.90%
Have you taken out loans to finance your PT Education?	N (78)	
Yes (private loans)	2	2.56%
Yes (federal loans)	46	58.97%
Yes (a combination of federal and private loans)	21	26.92%
No	9	11.54%
If you answered yes to "Have you taken out loans to finance your PT Education?" do you understand the interest rate and loan repayment terms?	N (67)	
Yes	46	68.66%
No	21	31.34%
Did you work prior to starting PT school?	N(78)	
Yes	74	94.87%
No	4	5.13%
What program are you enrolled in?	N(79)	
Residential	77	97.47%
Flex	2	2.53%

*Additional demographics collected but not reported in this table include ethnicity, sex, sexual orientation, and additional work history.

Financial Literacy Knowledge Results

Knowledge of career planning and financial literacy was assessed using the results from nine-questions in the survey administered to participants pre and post workshop (Questions 10-17). An independent T-Test was conducted to compare results for the group completing the pre-workshop survey to the group completing the post-workshop survey. The group of 55 participants that completed the post-workshop knowledge portion of the survey ($M=87\%$, $SD 220.72$) demonstrated significantly better knowledge scores $t(124) = 7.44$, $p < .05$ compared to the group of 77 participants that completed the pre-workshop knowledge portion of the survey ($M = 67\%$, $SD 282.31$).

Financial Literacy Confidence Results

Confidence in career planning and financial literacy topics was assessed using nine questions (Questions 1-9) from the full survey that were scaled on a 5-point Likert scale. Questions were developed by a team of two researchers and pre-tested during the pilot study. An independent T-Test was conducted to compare scores for the group completing the pre-workshop-survey to the group completing the post-workshop survey. The group of 53 participants that completed the post-workshop confidence portion of the survey ($M=35.79\%$, $SD 27.09$) demonstrated significantly improved confidence on the post-workshop survey $t(130) = 2.75$, $p < .05$ compared to the group of 79 participants that completed the pre-workshop confidence portion of the survey ($M = 32.62$, $SD 64.57$).

Post-Workshop Feedback

Within the post-workshop survey, participants were asked several questions related to financial literacy and their experience in the workshop. Table 3 summarizes answers to three questions related to the importance of the workshop.

Table 3. Post-Workshop Questions – Importance of Workshops

Question	N	Results
Q#19: How important do you think it is to learn about financial literacy while in PT school (scaled 0-100)	54	M=96/100
Q#26: Was the time allotted to the workshop appropriate?	52	Yes: 100% No: 0%
Q#29: Should this content become standard in the DPT curricula?	52	Yes: 87% No: 13%

In addition, there were 8 open-ended questions in the post-workshop survey (Questions: 23, 24, 25, 28, 29, 31, 32, and 33). For each question, the number of responses was tabulated using Survey Monkey and the most common word or phrase was tagged. From this, three themes emerged: Value of Information, Impact of Salary, and Method of Instruction. Descriptive quotes that illustrate the common phrase for each theme are depicted in Table 4.

Table 4: Descriptive Themes and Quotes from Open-Ended Survey Responses

Descriptive Theme and Quotes			
Question from Post-Workshop Survey	Number of Respondents	Most Referenced Word (Occurrences/% of references)	Descriptive Quotes
Theme: Value of Information			
Q23: What did you like best about this workshop?	38	Information (16/42%)	<ul style="list-style-type: none"> “Provided multiple resources to find further real world information and apply it.” “I thought this was very helpful workshop, the best part for me was the number of resources given out to help us find valuable information such as salaries and loan repayment calculators.” “The information was concise and easy to digest.”
Q25: What would you have liked more information on during the workshop?	31	Information (9/29%)	<ul style="list-style-type: none"> “Interview information” “I would have liked more information on malpractice insurance and other typical financial obligations associated with physical therapy.” “Information regarding salaries and counter offering”
Q31: Please provide any other comments relating to your experience with this workshop.	14	N/A (5/37%) Information (3/21%)	<ul style="list-style-type: none"> “Great workshop. Learning how to be financially cognizant and literate is an invaluable skill and will benefit students for years after graduation.” “I think this curriculum should be an elective for DPT students who want to learn more about it”
Theme: Impact of Salary			
Q32 Are there any additional topic you think we missed that you wanted to learn more about related to career	24	N/A (6/25%) Salaries (3/12%)	<ul style="list-style-type: none"> “stack the different salaries among the different settings of PT and geographical area. perhaps the 10 yr projections for profession.”

Descriptive Theme and Quotes			
planning and financial literacy?			
Q31: What new sources are you now aware of to learn about financial literacy?	28	Loan (5/18%) Job (5/18%) Salary (5/18%)	<ul style="list-style-type: none"> • “There are many different resources available that I was not aware of prior to this workshop. I really liked the Glassdoor resource in terms of looking at projected salaries.” • “I’m more aware of loan repayment options and resources for job salaries and other financial assistance after graduation” • “All the different repayment options, as well as all the help that can be provided to us as new graduates going to our first job.” • “All the job resources and loan calculators to estimate budgeting.”
Q24: What did you like least about this workshop?	34	Workshop (7/20%) Video (4/11%) N/A (7/20%) Nothing (3/8.2%)	<ul style="list-style-type: none"> • “I would rather have a PPT style lecture or document based sourced rather than video.” • “I would have liked the workshop to be synchronous so that there was an opportunity for Q & A”
Theme: Instructional Methods			
Q28: What instructional methods did you enjoy the most and why?	28	Keywords were diverse and equally dispersed between: resources, job, topics, examples, videos, visual	<ul style="list-style-type: none"> • “The examples provide since they were easier to wrap my brain around the concepts.” • “Both visual and audio methods were helpful with real life examples.” • “I liked that it was in short modules so I could take breaks throughout the presentation.” • “I enjoyed the entire workshop. I think this topic is so important but often left out in this curriculum. I feel a bit better about my financial situation going forward as I have gained some valuable information.” • “Viewing the PowerPoint as well as having someone talk over it was helpful. I feel there is more insight gained when someone speaks over a PowerPoint rather than just reading the slides.” • “Interactive assignments and resources” • “Real world perspective from presenter”
Q29: What could the presenter have done differently to better facilitate your learning?	26	N/A (6/23%) Nothing (3/11%)	<ul style="list-style-type: none"> • “A synchronous workshop would have facilitated my learning more” • “I liked the pause and writing your goals part. It was a good way to personalize what your priorities are.” • Provide more example of real “situations we may be facing upon graduation.”

DISCUSSION

This study is the first of its kind to explore the merits of a financial literacy workshop within a DPT program. Previous studies investigated whether financial self-efficacy impacts the stress associated with student debt and whether DPT students have financial literacy.^{34,35} However, no prior studies have investigated the effect of a career planning model-based workshop on improving financial literacy knowledge and confidence among allied health profession students, and specifically among DPT students.

Participants in our sample were similar but more diverse than mean program data of DPT students according to the Commission of Accreditation in Physical Therapy Education Aggregate Data.³⁶ Average physical therapy programs consist of 60% females and 28% minoritized students while this study's participants consisted of 56% female students 47% minoritized students. Compared to the participant data that informed the 2020 American Physical Therapy Association Impact of Student Debt on the Physical Therapy Profession, this study's participants were more diverse with 47% non-white respondents in this study compared to only 10% non-white respondents in the APTA report.³ Our participants also differed in that only 11% of students report having not taken out loans for their education. In comparison, 17% of respondents in the APTA report stated not taking out loans. Moreover, the data in the APTA report shows PTs identified as non-white reported a higher level of outstanding student debt on average (\$111,543) in comparison to PTs identified as white (\$97,268).³ Considering that our sample had more minoritized participants, the findings may be more distinct when considering the negative impact of student loan debt on PTs. In addition, recent research has found that the debt burden has impacted minoritized students to a greater extent.¹¹ Therefore, these results may be particularly important given that they include a more diverse student sample. As we implement initiatives to diversify the PT profession to be more representative of the US Population, the results of this study can help inform future research that considers financial literacy and student loan debt of minoritized DPT students.

Financial literacy knowledge and confidence of participants in the workshop significantly improved indicating that the workshop had a positive effect on students' confidence about topics related to financial literacy and career planning. While published studies have looked at the effect of a workshop on improving financial literacy in allied health, the results suggested that improved self-efficacy is predictive of less stress.³⁴ Therefore, future research should incorporate whether these types of workshops can improve knowledge and confidence and whether that improvement in-turn leads to a reduction in stress.

Themes from the post workshop feedback indicate that students appreciated receiving information related to career-specific financial literacy. This is consistent with findings from previous studies with Master of Social Work and Doctor of Pharmacy students.^{24, 25} In addition, our study participants overwhelmingly agreed that the information was crucially important, but also that it was adequately covered in the one-hour asynchronous method, which allowed for students to pause and complete goal setting and budgeting activities in more time as needed. This suggests that effective financial literacy educational methods can be built into DPT curricula without extending the curriculum.

Limitations

Our study did not include information related to age or relationship status. In a study that surveyed recent graduates on the impact of student debt on the choice students make in selecting either traditional 4-month long terminal clinical experience or one of two nontraditional clinical experiences (such as a 12-month internship or 16-month internship leading into residency model), student debt did not predict student choices, but rather age and relationship status did.³⁷ Hence, future research that investigates the effectiveness of financial literacy interventions among DPT students should include age and relationship status as demographic information to determine if these factors impact the effect of this type of workshop.

Additional limitations of this study relate to unequal sample sizes and inability to pair individual pre- and post- survey data. Thus, we could not perform a within-subjects comparison, which was due to participation being voluntary and anonymous. And finally, our study was conducted within one university's DPT programs, which limits generalization of the results. However, within this university system, the financial literacy workshop was administered to two different types of DPT program delivery models (Flex/Hybrid and Traditional).

Future Directions

Future studies should explore the use of standardized tools to assess financial literacy in DPT students and administer the tool and the educational workshop to multiple DPT and allied health programs with varying demographics to improve application and generalizability of the results. Additional research should also investigate the long-term effects of such educational workshops on loan repayment success, job satisfaction, and career retention by using a repeated measures design where students are surveyed again post-graduation.

CONCLUSIONS

This study is the first to demonstrate that it is feasible and effective to implement an asynchronous model-driven career planning and financial literacy workshop into a DPT program. Utilization of a model driven approach resulted in improved knowledge and confidence in career planning and financial literacy among DPT students. These findings are novel as this study is the first of its kind to assess the effectiveness of a financial literacy workshop for DPT students. This model of teaching financial literacy has the potential to be applied to other allied health programs for the benefit of their learners. The financial environment of the individual health care provider and the structures and systems they operate in impacts their burnout, thus it is imperative to recognize and address this often underrecognized threat among developing health care professionals by providing education that enhances their knowledge and confidence in financial literacy.³⁸

REFERENCES

1. Baum, S, McPherson, M, Brago, B, Minton, S. Tuition and state appropriations. *Urban Institute*; 2018.
2. Harkin T. Budget control act of 2011.; 2011. Accessed May 27, 2022. <http://www.congress.gov/>
3. Impact of student debt on the physical therapy profession. APTA; 2020. <https://www.apta.org/contentassets/ee2d1bb7f9d841c983d0f21bb076bb79/impact-of-student-debt-report.pdf>
4. Berry JW. A National survey of student loan debt accrued by doctor of physical therapy students. *J Phys Ther Educ*. 2021;35(1):12.
5. A. 'We're hurting big time': Medicare therapy cut worsens SNF staffing crisis, Care Access. Skilled Nursing News. Published April 17, 2022. Accessed June 2, 2022. <https://skillednursingnews.com/2022/04/were-hurting-big-time-medicare-therapy-cut-worsens-snf-staffing-crisis-care-access/>
6. Medicare physician fee schedule advocacy. APTA. Accessed June 2, 2022. <https://www.apta.org/advocacy/issues/medicare-physician-fee-schedule>
7. Pabian PS, King KP, Tippet S. Student debt in professional doctoral health care disciplines. *J Phys Ther Educ*. 2018;32(2). doi:10.1097/JTE.000000000000044
8. Shields RK, Dudley-Javoroski S. Physiotherapy education is a good financial investment, up to a certain level of student debt: an inter-professional economic analysis. *J Physiother*. 2018;64(3):183-191.
9. Jette DU. Physical therapist student loan debt. *Phys Ther*. 2016;96(11):1685-1688.
10. Ambler SB. The Debt Burden of Entry-Level Physical Therapists. *Phys Ther*. 2020;100(4):591-599.
11. Rotondo AL. Financial impact of COVID-19 on DPT students in the United States. *Jcept*. 2022;4. doi:10.52214/jcept.v4.8157
12. Ambler SB, Jette DU, Nordstrom T. Return on investment in physical therapy: Professional tension. *Phys Ther*. 2020;100(12):2227-2230.
13. APTA Financial Solutions Center. APTA. Accessed June 24, 2023. <https://www.apta.org/your-career/financial-management/financial-solutions-center>
14. Kuperstein CSCW. Doctor of physical therapy initial Job characteristics and the impact of student debt. *Phys Ther J Policy Adm Leadersh*. 2019;19(3):13-22.
15. Webster P, North SE. Health professions educational debt: Personal, professional, and psychological impacts 5 years post-graduation. *Front Med*. 2022;9:746463.
16. Mulligan EP, Dickson T, DeVahl J. Financial literacy among health professions graduate students. *J Allied Health*. 2020;49(3):181-189.
17. Loria K. Financial literacy and the new DPT Grad. *PT In Motion*. 2017;9(1):34.
18. Handford KTJC. Financing physical therapy doctoral education. *J Allied Health*. 2011;40(4):169-173.
19. Stoll T. Financial literacy definition: Top 8 industry definitions. Financial Educators Council. Published October 5, 2013. Accessed September 2, 2021. <https://www.financialeducatorscouncil.org/financial-literacy-definition/>
20. CAPTE. Standards and required elements for accreditation of physical therapist education programs.; 2020. Accessed July 15, 2021. <https://www.capteonline.org/globalassets/capte-docs/capte-pt-standards-required-elements.pdf>
21. Accreditation handbook. Commission on accreditation in physical therapy education. Accessed March 25, 2023. https://www.capteonline.org/faculty-and-program-resources/resource_documents/accreditation-handbook
22. Wendler C, Bridgeman B, Markle R, Cline F, Bell N, McAllister P, Kent J. Pathways through graduate school and into careers executive summary. *Educational Testing Service and the Council of Graduate Schools*; 2012. http://pathwaysreport.org/rsc/pdf/ex_summary.pdf
23. Jones M, McIntyre J, Naylor S. Are physiotherapy students adequately prepared to successfully gain employment? *Physiotherapy*. 2010;96(2):169-175.

24. Deck SM, Miller JJ, Conley CL. Field note—From MSW to J-O-B: Using field seminar to prepare students for employment. *J Soc Work Educ.* 2017;53(4):771-776.
25. Zorek JA, Katz NL, Popovich NG. Guest speakers in a professional development seminar series. *Am J Pharm Educ.* 2011;75(2):28.
26. Magnusson K. Five processes of career planning. Accessed July 17, 2021. <https://www.counseling.org/Resources/Library/ERIC%20Digests/95-065.pdf>
27. 5-Step Career Development Model. Simmons University. Accessed August 19, 2021. <https://www.simmons.edu/your-simmons/student-support-resources/career-development/5-step-career-development-model>
28. APTA Financial Solutions Center Faculty Toolkit. Published January 12, 2021. Accessed September 7, 2021. <https://www.apta.org/for-educators/curriculum-resources/financial-solutions-center-faculty-toolkit>
29. Measuring Financial Literacy: Questionnaire and guidance notes for conducting an internationally comparable survey of financial literacy. International Network on Financial Education; 2011. <https://www.oecd.org/finance/financial-education/49319977.pdf>
30. Career Decision Self-Efficacy Scale (CDSE) - Mind Garden. Accessed August 19, 2021. <https://www.mindgarden.com/79-career-decision-self-efficacy-scale>
31. Taylor KM, Betz NE. Career decision-making self-efficacy scale. *PsycTESTS Dataset.* Published online 2012. doi:10.1037/t01482-000
32. Croasmun Lee Ostrom J. Using likert-type scales in the social sciences. *J. Adult Educ.* 2011;40(1):19-22.
33. Sullivan GM, Artino AR Jr. Analyzing and interpreting data from likert-type scales. *J Grad Med Educ.* 2013;5(4):541-542
34. Dickson T, Mulligan EP, DeVahl J. The toll of student debt: Stress among health professions students and the promising role of financial self-efficacy on career choices. *J. Phys. Ther. Educ.* 2020;34(4):339.
35. Bynum LA. Financial Literacy: Examining whether third year physical therapy students have the financial knowledge to manage debt. Doctor of Philosophy in Health Administration and Education. William Carey University; 2022.
36. Aggregate Program Data. Commission on Accreditation in Physical Therapy Education. Accessed June 5, 2023. <https://www.capteonline.org/about-capte/data-and-research/aggregate-program-data>
37. Rodriguez JW, Davidson W, Joseph Palmer R III, Rapport MJ. Impact of student debt on decisions of terminal clinical education experiences in physical therapist education. *Internet j. allied health sci. pract.* 2022;20(3):8.
38. Dyrbye LN, Clinch M, Shanafelt TD, et al. Burnout among health care professionals: A call to explore and address this underrecognized threat to safe, high-quality care. *NAM Perspect.* 2017;7(7). doi:10.31478/201707b

APPENDIX A: FULL QUANTITATIVE SURVEY

The survey will be conducted using Survey Monkey and will include the following questions:

Completion of this survey will be considered informed consent. Please respond to each question as honestly as possible. The questionnaire should not take more than 10 minutes to complete.

Please answer the following demographic questions:

Demographic Questions (pre-survey only)								
Age	20-25	25-30	30-35	35-40	Above 40			
Sex (assigned at birth)	Male	Female						
Gender Identity	Female	Male	Trans-female	Trans-Male	Transgender	Non-binary/gender-nonconforming	Other	Prefer Not to Say
Sexual Orientation	Straight/Heterosexual		Gay or Lesbian	Bisexual		Other	Prefer not to say	
Ethnicity	Hispanic or Latino				Not Hispanic or Latino			
Race	Hispanic, Latino, or Spanish	Black or African American	American Indian or Alaskan Native	Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese, or other Asian	White	Native Hawaiian, Samoan, Chamorro, or Other Pacific Islander	Prefer to self-describe	Prefer not to say
Undergraduate Degree								
Undergraduate Major								
Have you taken out loans to finance your physical therapy education?	Yes (private loans)		Yes (federal loans)		Yes (A combination of private and federal loans)		No	
If yes, do you know and understand the interest rate and repayment terms of your loans?	Yes		No					
Did you work prior to starting PT school?	Yes		No					
Did you work Full-Time (more than 30 hours/week) or Part-Time (less than 30 hours/week)?	Full-time		Part-time					
If you answered yes, in what field did you work?						N/A		
If you worked full-time, how many years did you work before starting PT school?	<1		1-2		3-5		More than 5 years	
Have you worked during physical therapy school?	Yes		No					
If you answered yes, what type of work did you do?						N/A		
If you answered yes, how many hours a week did/do you work?						N/A		

For questions 1-9, please indicate whether you strongly agree (SA), agree (A), are neutral (N), disagree (D), or strongly disagree (SD).

Questions related to confidence in career planning in physical therapy				
1. I am confident in making goals for my career for the next ten years.				
SD	D	N	A	SA
2. I am confident in my ability to prepare materials for applying to my 1 st physical therapy job.				
SD	D	N	A	SA
3. I am confident I have the skills to decide whether a physical therapy job offer suits my career interests.				
SD	D	N	A	SA
4. I am confident I have the skills to decide whether a physical therapy job offers a salary and payment model that meets my financial needs.				
5. I am confident that once I have my 1 st job, I will be able to change settings within physical therapy if I want to.				
SD	D	N	A	SA
6. I am confident in my ability to prepare for physical therapy job interviews.				
SD	D	N	A	SA
7. I am confident that I can make decisions about the benefits package offered with a physical therapy job.				
SD	D	N	A	SA
8. I am confident that I can find resources to become more financially literate.				
SD	D	N	A	SA
9. I am confident in making decisions about consolidating loans, refinancing loans, and coming up with repayment plans for educational debt.				
SD	D	N	A	SA

For questions 10-22, please select the best answer.

Questions related to knowledge of career planning in physical therapy:					
10. Which of the following are tools where you can search for physical therapy jobs?					
Handshake	LinkedIn	APTA	Indeed	Glassdoor	All of the above
11. Which of the following physical therapy positions would most likely have the highest starting salary?					
A home health travel position in a rural area	An inpatient position in a suburban area	An outpatient position in a popular metropolitan area			
12. Which of the following positions is most likely to have the best mentorship opportunities?					
A home health position	A residency position	An inpatient position in a small hospital	An outpatient position in a busy clinic		
13. Which of the following websites includes information about average salaries?					
LinkedIn	Glassdoor		Indeed	Handshake	
14. Which of the following positions would allow for the most amount of flexibility with scheduling patients?					
Per Diem Inpatient	Per Diem outpatient	Per Diem Home Health	Per Diem SNF		
15. I am eligible for overtime pay in a physical therapy position if I have which of the following pay structures (choose all that apply):					
Salaried	Hourly	Pay Per Visit		Pay Per Unit	
16. Matching: Match the following physical therapy settings with most common pay structures					
Inpatient	Outpatient	Home Health	Travel		
Hourly	Salary	Pay per visit	Contract		
17. True/False: As a travel physical therapist, I will be eligible for benefits only during the time I am actively in contract with a site?					
True	False				
Questions related to financial literacy in physical therapy:					
18. Define financial literacy in your own words.					
19. How important do you think it is to learn about financial literacy while in PT school?					

Not Important 0	1	2	3	4	Extremely Important 5
20. Loan refinancing from federal to private loans will decrease my interest rate, but otherwise keep my loan terms the same.					
True		False			
21. Name an existing loan forgiveness program for physical therapy borrowers and describe how it works.					
22. Loan consolidation allows for using the "snowball method" to pay down debt.					
True		False			

For questions 24-34 please write-in your response (To be completed on post-survey only):

23. What did you like best about this workshop? _____.
24. What did you like least about this workshop? _____.
25. What would you have liked more information on during the workshop? _____.
26. Was the time allotted adequate to cover the topics enough? Y or N
27. If N, how much more time would you have preferred. _____
28. What instructional methods did you enjoy the most and why? _____.
29. What could the presenter have done differently to better facilitate your learning? _____.
30. Should this content become standard in DPT curricula?
31. Are there any additional topics you think we missed that you wanted to learn more about related to career planning and financial literacy? _____.
32. What new sources are you now aware of to learn about financial literacy?
33. Please provide any other comments relating to your experience with this workshop: _____.
34. Would you be willing to be contacted to complete an interview about this experience at a later date?
- _ yes, please follow the following [JotForm link](#) to enter your contact information, so that we can collect it confidentiality without tying your information to the results of this survey.
- _ no, thank you.