

MIXED METHODS ARTICLE

How physical therapy residents and fellows influence doctor of physical therapy students' experiences: a single program mixed methods study

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Abstract

Purpose: Physical therapy residency and fellowship programs help healthcare providers develop stronger clinical skills and professional confidence. While research shows that these programs benefit the residents and fellows, we know little about how these advanced practitioners impact entry-level Doctor of Physical Therapy (DPT) students they work with during their education. This study investigates the influence of physical therapy residents and fellows on the educational experience and professional development of DPT students through focused surveys and semi-structured interviews.

Methods: Students eligible (229) for this study were students enrolled in the DPT program from January 2018 to March 2022. Cohorts were selected based on their exposure to residents and fellows during their time in the DPT program. Students from the identified cohorts were invited to complete a web-based survey and participate in virtual interviews. An inductive content analysis approach was employed to identify and refine codes and establish themes.

Results: Twenty-three percent of students completed the survey (52), and 42 completed the interview. Seventy-three percent of students acknowledged that a residency and fellowship program associated with the DPT program positively enriched their educational experience. Additionally, 50% of students indicated that access to residents and fellows influenced their decision to pursue a residency or fellowship.

Conclusion: The findings suggest that integrating residents and fellows within a DPT program positively influences students' educational experiences and professional development within a single university setting. While these results are encouraging, additional research is warranted to deepen our understanding of this relationship.

Keywords: *physical therapy residency and fellowship; doctor of physical therapy students; post-professional education; DPT educational experience, DPT professional development*

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Residency and fellowship education have been integral to the physical therapy landscape for over three decades, with a notable surge in program proliferation over the last decade.¹ There are many described benefits to residency and fellowship training. Employers perceive graduates of post-professional programs favorably, attributing higher ratings in leadership, communication, clinical aptitude, scholarship,

and teaching compared to non-trained counterparts.² Moreover, treatment value and patient outcomes are improved among graduates of these programs.^{3,4,5} There is a variety of settings for both residency and fellowship programs with a range of diverse resources and supports.

Academic institution-based residency and fellowship programs may provide unique learning opportunities for entry-level Doctor of Physical Therapy (DPT) students,

post-professional residents, and fellows-in-training.⁶ Additionally, the educational environment fosters avenues for near-peer learning, mentorship, collaboration, and networking.⁷ A heterogeneous learning environment catalyzes ‘frequently exchanged feedback’ and ‘reciprocal teaching and learning’, nurturing all involved parties’ professional development and knowledge acquisition.⁷ Such pedagogical dynamics may not be as prevalent in non-academic settings.⁷ Residency and fellowship programs foster a culture of excellence within institutions, enhancing patient outcomes, professional development, and team satisfaction.⁴ Notably, residency graduates demonstrate an increased involvement in clinical instruction roles.⁸

Most academic-based post-professional programs are intricately linked with DPT programs. Approximately 22% of residencies and 24% of fellowships are housed within academic institutions.¹ Specific to orthopedic residency programs, 93% of programs within educational institutions offer resident instructional/teaching opportunities within the DPT program curriculum, a stark contrast to non-academic affiliated programs.⁹ The inclusion of residency and fellowship training programs housed within DPT programs has been encouraged, given the many benefits to all learners. Recent recommendations advocate for the active participation of all academic programs in residency education.¹⁰

Research on the impact of physical therapy residents and fellows on DPT students when associated with post-professional programs is scarce, and there are no studies exploring the effect on DPT students when these programs are all housed within an academic unit.¹¹ The purpose of this study was to investigate DPT students’ perceptions on the role of residency and fellowship trainees included as part of the DPT education. A mixed-methods design was used to explore the effects of post-professional physical therapy residents and fellows’ impact on DPT students’ educational experience and overall professional development.

Methods

Study design

This study applied a mixed methods approach using both survey and interview data to explore students’ views on the influence of having a resident/fellow involved in their educational experience and professional development. A study-specific survey was created and disseminated through Qualtrics (Appendix 1). Before completing the survey, each student consented online. Following consent, basic demographic information and Likert scale questions regarding the role of orthopedic residents or fellows on physical therapy’ students were collected. The intent of the survey was to include priming questions that were later elaborated on in the interview.

Students who completed the surveys were invited to participate in semi-structured interviews to gather more details regarding their educational experiences. The planned

interview questions were created to explore the aims of the study with additional questions added for each student based on the results of their survey responses. A qualitative content analysis approach¹² was used to code data into themes based on the transcribed interviews. This research study was funded through an institutional grant to facilitate recruitment and survey design/support. This study was approved by the Institutional Review Board (ETSU 0122.14).

Student selection

Students were recruited using a convenience sample of students and alumni (defined as students within the text) enrolled in a regional state university’s DPT program from January 2018 until March 2022, matching when the orthopedic residency and the orthopedic manual physical therapy fellowship program began teaching and interacting within the DPT program. The residents and fellows were lab assistants for the musculoskeletal and basic skills curricula (8 total credit hours, including approximately 4 hours of lab-based teaching per week), and they taught short sections of the musculoskeletal course regional content. Additionally, they served as clinical instructors to some students and offered lab practice sessions and outside educational opportunities. Two hundred and twenty-nine students met the inclusion criteria.

Data collection

Recruitment occurred via email using the contact information list for each DPT cohort and advertisement on the DPT Facebook page. Initial informed consent was obtained through the online survey, and agreement and preference were given for a follow-up interview. The semi-structured interviews were conducted online (Zoom platform). Interviews were scheduled for 15–20 minutes from March to May of 2022. A single researcher guided each interview using semi-structured questions. Seven third-year DPT students conducted interviews to reduce the potential bias of course faculty and post-graduate program mentors. Two senior authors (CB and JB) with qualitative research experience trained the student interviewers. The interview script and process were reviewed with the entire team, and all interviewers conducted one practice interview before their first study-related interview. Following the practice interview, feedback was given to improve the consistency of the interview across multiple interviewees. Each interview was audio recorded (video off) and then transcribed. All transcriptions were reviewed for accuracy by a second reviewer. Students did not have an opportunity to review their transcripts.

Data analysis

Survey data

Survey data were to be reported descriptively to describe student agreement with survey questions and to plan individual interviews. SPSS v28 was used for survey data.

Interview data

An inductive content analysis was applied to code and analyze interview transcripts.¹² Each pair of researchers developed their own codebook with subcategories for the interviews they did not perform themselves. Then, each of the three pairs gathered with senior researchers CB and JB for consensus coding. The subcategories were iteratively developed based on ongoing consensus coding discussions. Coding was then finalized by reduction of redundancies within themes, and each theme and subcategory were reviewed for coherency. Interview data were analyzed using the NVivo software. By evaluating the code frequency counts, the dataset was determined to have reached saturation.¹³

Results

Twenty-three percent of students completed the survey (52), and 42 completed the interview. Ten students failed to respond to the confirmation email and were not interviewed. Forty-five percent of the students who completed an interview were male, and 55% were female. Students' ages ranged from 22 to 38. Fifty-eight percent ($n = 30$) of students were current DPT students, while 42% ($n = 22$) were DPT program alumni. Three of the 22 alums interviewed completed residency programs: two in orthopedics and one in cardiopulmonary. One of the three also completed an orthopedic manual fellowship program. Eighty-five

percent of students and 68% of alumni expressed interest in becoming a board-certified clinical specialist (Table 1).

Survey results

Survey responses are presented in Fig. 1. Generally, the influence of having residents or fellows involved in entry-level education was perceived positively, with some positive influence on the students' interest, regardless of clinical practice area. Less interest was noted specifically in orthopedic residency, despite residents/fellows training in that practice area.

Content analysis findings

The two overarching themes of our analysis were educational experience and professional development. Responses

Table 1. Interest in the clinical specialty area by cohort

Graduation year	2018	2019	2020	2021	2022	2023	Total
Cardiopulmonary	1	0	0	0	0	0	1
Geriatrics	1	2	0	0	1	1	5
Neurology	0	1	0	0	0	2	3
Orthopedics	1	2	0	0	9	7	19
Pediatrics	1	0	0	2	3	3	9
Sports	0	0	0	1	4	2	7
Women's Health	2	1	0	0	1	0	4
Total	6	6	0	3	18	15	48

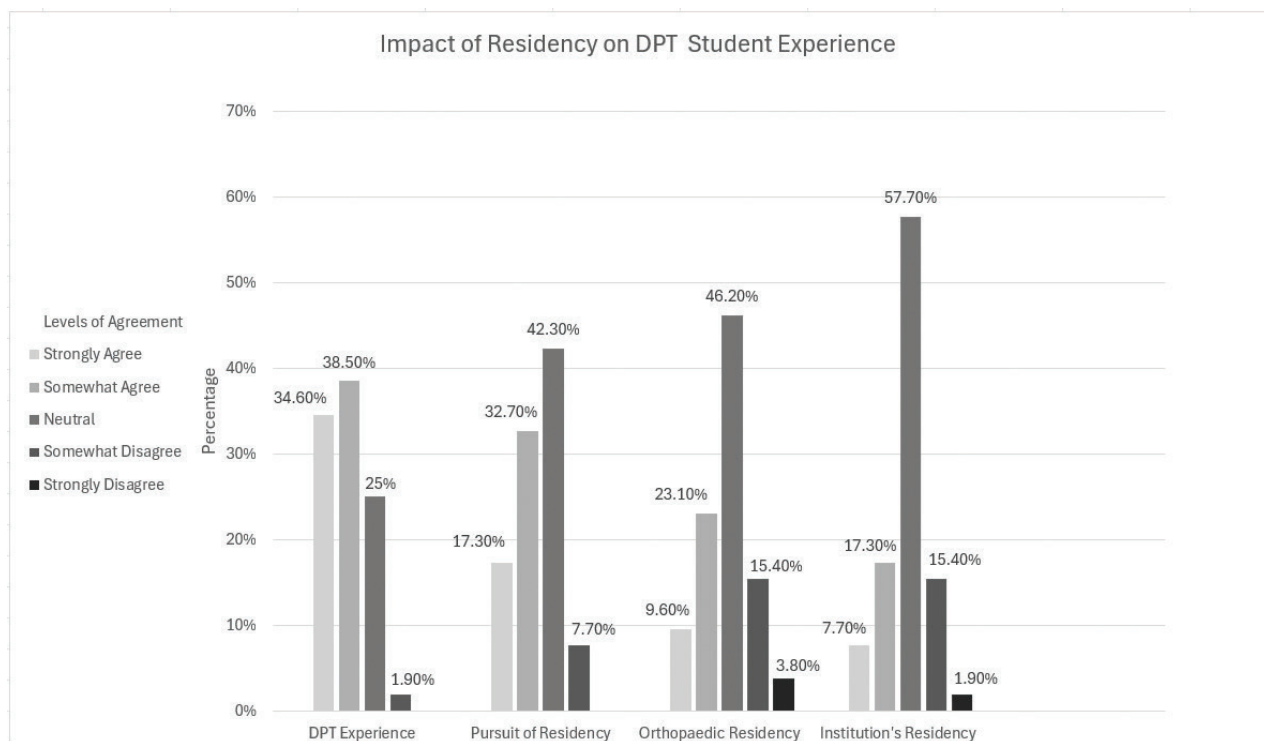


Fig. 1. Bar graph of survey response questions.

Supporting description: As illustrated this image depicts the percentage of responses to each of the four questions students responded to. Left to right representing the strongly agree to strongly disagree responses.

Table 2. Examples of comments by theme and sub-theme

Subcategories of theme	Illustrative example comments
Theme 1: Educational experience – Positive	
Resident Interaction	<i>'I feel like it's made it easier to an extent to ask them certain questions that we may be more hesitant to ask a more seasoned professor. So instead of feeling like we're asking what we may think is a ridiculous question, asking someone who's younger may have had that question cross their mind more often than someone who is a little bit older. And it just makes it easier and more approachable to go up to one of them and interact with him'.</i>
Career Advancement	<i>'It gave me insight into what potential opportunities were available for residents or fellows and I guess opened my eyes to the opportunities that might be open to me as far as pursuing a career in academia, or I could pursue more of a clinical role, or I could pursue more of a research-oriented role. Just let me know that going through residency and fellowships would prepare me for multiple areas versus going through physical therapy school prepared me more for just the clinical setting'.</i>
Clinical Integration	<i>'I can kind of use some of what they said to help explain it to my patients better and also just the techniques in general, you know they were good about saying "hey this this position that they showed us a little awkward why don't you try this position", you know I found in my experience, you know more comfortable for the patient stuff like that so it's been really nice just because I can kind of look back on the experience with the residents and really apply that to my clinicals'.</i>
Perspective of Residents and Fellows	<i>'It gave me that kind of other perspective, especially from a new Grad. So, having that person who's like not that much further ahead than us. Who is still able to share their experience, not only from what they learned in their DPT program but also their you know, early career clinical knowledge which is completely different, in my opinion, then you know, a season clinician who is faculty and a DPT Program'.</i>
Theme 2: Professional development – Positive	
Professional advancement/ Awareness	<i>'the residency program it really pushed my beliefs that evidence based practice is the best way to have therapy completed. And so, knowing what is knowing that the residency program teaches you how to think and how to look up the best evidence-based practice I think, was, it was a result of having the residency program there'.</i>
Depth of knowledge/Skills	<i>'... They really emphasize, you know, make sure you look at the big picture, make sure you critically think don't you know hone in on one thing I think they really taught us very well, and to emphasize, you know the critically think, look at the patient, it may not always appear, you know, for example, like if it's a, if it's you know shoulder pain, but it could become from the neck, it could be coming from the elbow so making sure you critically, you screen things out and you're thorough in your clinical examination process, and they also emphasize don't always do an exercise just to do an exercise have a reasoning behind it like be very clinical thoughtful PT that way your patient outcomes are better and really work on refining your skills and also they really emphasize, you know keep looking at the evidence, because the evidence keeps on changing and changing because, like you know this past year, the new low back clinical practice guidelines came back so like making sure you stay on top of like what's the latest and the greatest that way your patient outcomes can only improve'.</i>
Mentorship	<i>'it just makes me more willing and eager to reach out to other people, other therapists, and get their thoughts or guidance because that's kind of what the residency or fellowship is to continue having that mentorship and to continue learning'.</i>
Continuing Education	<i>'Yeah I think I was lucky to be around a few different residents and I think they I mean they kind of they kind of are what you know lifelong learning and continuing to stay on top, on top of your education and grow in the profession and so just being around them kind of helped set that example for me and push me to kind of want to do that when I graduated and got out into the field'.</i>
Confidence	<i>'I think that in our interactions with the residence it's really made me more confident in interacting with other patients and interacting in a clinical setting'.</i>

Table 3. Examples of neutral or negative comments by theme and topic

Theme:Topic	Illustrative example comments
Educational Experience: Resident / Fellow Qualifications to Teach	<i>'There were times where I was kind of questioning, like 'okay, so these people are still learning this stuff. Is what they're teaching accurate?' But there were times where I was kind of questioning, 'okay, so this person is perfecting this technique still' and then I sometimes maybe want to go ask the professor, 'okay, hey can you show me this' and then it would just give me a different perspective'.</i>
Professional Development: Costs of Residency and Fellowship Training	<i>'So like I said I would be interested in an orthopedic or sports based residency my only concerns or the only things holding me back, and I know we've heard that a million times, through our program and by many different people is that I always hear them say don't worry about the money, the money will come go ahead and try it and, like if you can go ahead and try to go through a residency or try to get some specialization and then like early on and that way you know you can kind of build the foundational knowledge after the entry level DPT and then they always say, like the money will come afterward. And while I understand that I also would just be concerned about either pay, like the decrease in pay of going through residency program compared to just well what if I would have spent that year actually working and getting clinical experience, then also getting full salary or full pay. And then, so yeah, I guess just the salary or whatever pay we get through residency programs being lower, and I know I've think I've heard it as maybe like two thirds of a normal salary or like 70% of a normal salary'.</i>
Professional Development: Didactic Content	<i>'Having residents there influenced me to probably not want to do a residency just because I feel like a lot of the stuff that they go over as a lot of the stuff we went over in school just maybe in a little bit more detail, which I feel like with experience and working, you can gain some of that experience and not have to do a residency or fellowship'.</i>

were coded as positive, negative, or neutral within each theme. Additional positive subcategories are noted in Table 2. Eighty-six percent of comments identified in the educational experience and professional development themes were positive. Illustrative neutral or negative comments by theme and topic are included in Table 3.

Theme 1: Educational experience

Ninety-one percent of the responses to this theme were positive, 5% were negative, and 4% were neutral. The positive subcategories identified included resident interaction, career advancement, clinical integration, and the perspective of the residents/fellows. Table 2 includes representative quotations from each subcategory identified. Due to limited responses and lack of saturation, no subcategories emerged from the neutral or negative responses.

Students positively highlighted the approachability and availability of residents/fellows and the benefit of having a licensed clinician who had more recently been in the student's shoes to interact in a lab environment – in addition to the professor. Students noted this interaction added to the relatability of the student-to-resident/fellow relationship. Students also noted that residents/fellows discussed opportunities beyond physical therapy school and provided ongoing information to students regarding further education. These mentors provided a first-hand look into professional responsibilities, including working as a physical therapist, pursuing continued education, and seeking career opportunities.

Students reported a positive impact regarding clinical skills and overall patient education to help further their clinical expertise. All residents/fellows primarily practice in the clinic and have readily available experiences to draw from, with informal conversations that allow students to connect classroom content to clinical applications. Many students also acknowledged that personal interaction with residents/fellows created a positive learning atmosphere that helped bridge the gap between experienced clinicians and student physical therapists. A small percentage (5%) of students mentioned the lack of preparedness and perceived inexperience with the residents' and fellows' teaching approach. This led students to question the credibility of some residents/fellows, and resulted in some uncertainty regarding classroom instruction.

Theme 2: Professional development

Many interview responses within the overarching professional development theme were positive (70%). The prominent positive subcategories consisted of professional advancement/awareness, depth of knowledge/skills, mentorship, continuing education, and confidence. The remaining 30% of responses acquired were neutral or negative. The notable negative subcategories related to the professional trajectory of residency and fellowship included repetitive course material and a decrease in salary.

The largest subcategory within the positive professional development theme is professional advancement/awareness. Professional advancement refers to improving, enhancing, or refining an individual's career or clinical experiences. Responses presented commonalities regarding evidence-based practice and improving clinical reasoning skills. Some elaborated on the influence of residents/fellows on evidence-based practice. Awareness included responses about the effect of having insight into a physical therapy residency and fellowship program. Most responses within this category referred to the positive influence of gaining insight into the inner workings of a residency or fellowship. Although various responses partially credit the presence of residents/fellows for their professional development, some students noted salary reduction as a deterring factor when considering residency. Student debt is an issue that students perceive as a barrier to pursuing a residency or fellowship. Some students were less likely to accept a decreased salary in exchange for a year of one-on-one mentorship and further education.

The second largest subcategory within professional development was depth of knowledge and skills. Multiple students commented on the impact of residents/fellows on their psychomotor skill development and the progression of knowledge within the classroom and clinic. Additionally, interactions with residents within their DPT education improved their clinical reasoning skills, thought processes, and proficiency in entry-level psychomotor skills.

The subcategory of mentorship encompasses the interactions, guidance, and networking that students encountered with the residents/fellows during their time in the DPT program. Whether students reported mentorship from residents or fellows, or networking with clinical instructors, many linked these interactions to the presence of a residency or fellowship program. There were also comments about the 'one-on-one mentorship' that residents/fellows receive within their program, which various students witnessed as a positive factor in their professional development, seeing mentorship modeled.

Another subcategory that emerged was the influence of student-to-resident interactions on post-professional continuing education, both positively and negatively. Students described how these interactions could influence their decision to pursue a residency or fellowship over other continuing education options. Conversely, some students were discouraged from pursuing a residency or fellowship, noting that the didactic content in such programs felt redundant with the material covered in their entry-level DPT education. Figure 2 was created to summarize and portray the students' perceptions of the positive influences of the residents' and fellows' roles on their learning.



Fig. 2. Infographic of the themes and sub-themes identified.

Supporting description: As illustrated in this accompanying infographic, the responses revealed two themes within the student experience: one related to educational experiences and the other to professional development. Within the educational experience theme, perspectives from residents and fellows, clinical integrations, resident interactions, and career advancement were noted as sub-themes. Within the professional development theme, continuing education, depth of knowledge, mentorship, professional advancement, and confidence building were identified as sub-themes.

The last subcategory within professional development is confidence, which pertains to trust and self-assurance in psychomotor skills and abilities. Many students' comments contained an underlying tone of a perceived increase in confidence or self-efficacy resulting from working with residents/fellows during their DPT education.

Discussion

This study explored the influence of integrating physical therapy residents/fellows into a DPT program. The findings of this study shed light on the effects of post-professional physical therapy residents/fellows on DPT students within an academic institution. The overall influence on DPT students appears positive as indicated on surveys and extrapolated in interviews. It provides a unique framework for education and professional development that may not be available in DPT programs without an associated residency or fellowship program.

Educational experience

The overwhelmingly positive responses regarding the educational experience highlight the significant role that residents/fellows could play in enriching the learning

environment for DPT students. The close interaction between students and residents or fellows fosters mentorship, collaboration, and the exchange of knowledge and skills. The presence of residents or fellows as an addition to the faculty provides students with additional perspectives and insights, contributing to a more comprehensive educational experience.^{6,7}

One concern raised was the perceived inexperience of residents/fellows, which may occasionally lead to uncertainty among students. When residents/fellows led didactic or lab content, some students expressed concern about the accuracy of the didactic information, proper skill techniques, and overall lack of teaching experience. This perception may be mitigated through a more structured integration of residents/fellows into DPT education. Including a teaching and learning curriculum, a review of course topics before classroom time, clear roles and responsibilities, and additional training may be opportunities to enhance residents' and fellows' effectiveness as educators and mentors. While this concern should not be overlooked, it should be noted that these negative responses accounted for 5% of all reactions regarding educational experience.

Professional development

The positive influence of residents/fellows on professional development is evident, with students reporting improvements in clinical skills, career advancement, and confidence. Mentorship emerges as a crucial component, with residents/fellows serving as role models and guides for students and alumni. Motivations found to pursue physical therapy residency or fellowship training include the desire to improve patient care, develop expert practice, and enhance career development.¹⁴ These critical attributes may explain why DPT students had such positive experiences with the residents/fellows. Exposure to residents/fellows also influences students' decisions regarding further education and career pathways, although concerns about salary reduction and material redundancy are noted.

Graduates of DPT programs possess a wider breadth of knowledge and less depth than most experienced healthcare clinicians.¹⁵ One method for fast-tracking this depth is through a residency or fellowship program.¹⁵ DPT students often lack the depth required to become experts, which may be part of the rationale behind why some students felt that residency or fellowship training was redundant to their DPT education. DPT students may not be able to fully appreciate the depth of knowledge and clinical proficiency needed for advanced practice at their stage of learning. Thus, additional exposure in a clinical setting, including that of a resident or fellow, paired with educational exposure, may assist DPT students in understanding the role of residency or fellowship training.

The cost of becoming a physical therapist is a professional concern and continues to increase.¹⁶ Student interviews share this sentiment, however, there appears to be a gap in what DPT students understand about residency or fellowship training costs and financial benefits. The cost is program-dependent and varies depending on the residency or fellowship program. Many programs use a tuition or reduced salary model. However, some have no cost or may offer a full salary.¹ Upfront costs may exist, yet recent data from the American Physical Therapy Association (APTA) suggest that hourly earnings are higher in board-certified specialists.¹⁷ Residency graduates have about 16.4 times greater odds of being board-certified than those who do not complete a residency program.¹⁷ Residency graduates are also more likely to become board-certified early in their careers, which may lead to increased wages over time.¹⁷ Fellowship graduates are also reported to have higher incomes (~10%) than nationally reported values.¹⁸ Graduates of residency and fellowship programs also exhibit high job/career satisfaction and, when paired with the higher earning potential, should be a consideration to offset the initial costs or salary reductions.¹⁹

Limitations

This study has several limitations. The study focused on a single program, and this inherently limits the generalizability of the results. Further research with a broader range of physical therapy programs is needed to fully understand the effects of integrating a residency or fellowship into a DPT program. The small sample size (18%) of available students limited the complete understanding of the influence on DPT students in this single program. The experience of those students not interviewed may differ from those who completed the study. Additionally, those students interviewed may have recall bias, influencing the interviews and the student's overall impression. Other forms of communication, such as body language and tone of voice, were not accounted for in the interviews. Lastly, it is plausible that the students interviewed did not want to discuss the negative influence of the residents/fellows on their DPT education. The minor negative aspects noted should serve as a glimpse into DPT students' views and need to be further researched.

Future research directions

Further research is needed to explore the long-term influence of residents/fellows on DPT students' professional pathways. Longitudinal studies that track graduates of residency and fellowship programs, assessing their clinical outcomes, career advancement, and job satisfaction, can provide valuable data to inform programmatic improvements and policy decisions.

Moreover, comparative studies examining the outcomes of students exposed to residents/fellows versus those who do not can help explain the unique benefits of residency education. Exploring the perspectives of academic faculty, clinical instructors, and employers can provide a more comprehensive understanding of the broader implications of residency and fellowship programs on physical therapy education and practice. Understanding residents' and fellows' perceptions of acting as mentors and educators for DPT students may also guide programmatic planning.

In conclusion, integrating residents/fellows within academic institutions may offer unforeseen benefits for DPT students, including enhanced educational experiences, professional development, and career opportunities. These benefits appear to outweigh the perceived disadvantages found within this program. By addressing challenges and leveraging opportunities identified in this study and through future research exploration, institutions can optimize the influence of post-professional education programs on the future of physical therapy practice.

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Conflict of interest and funding

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Ethical approval

The study was approved as exempt from review board approval (study ID: c0122.14).

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APPENDIX I: COMPLETE SURVEY

Demographic Information

1. What is your name?
2. What is your age?
3. What is your gender?
4. What is the year of your graduation from the ETSU DPT Program?
5. What is your preferred email address for communication during this survey?
6. Have you completed a residency or a fellowship program?
 - a. Yes (1)
 - b. No (2)
7. If Yes: Which program did you complete?
 - a. Residency
 - b. Fellowship
 - c. Both residency and fellowship
8. What clinical specialization(s) do you hold? (Check all that apply)
 - a. Cardiovascular & Pulmonary (1)
 - b. Clinical Electrophysiology (2)
 - c. Geriatrics (3)
 - d. Neurology (4)
 - e. Orthopedics (5)
 - f. Pediatrics (6)
 - g. Sports (7)
 - h. Women's Health (8)
 - i. I am not a certified clinical specialist (9)
9. Which clinical specializations do you plan to obtain?
 - a. Cardiovascular & Pulmonary (1)
 - b. Clinical Electrophysiology (2)
 - c. Geriatrics (3)
 - d. Neurology (4)
 - e. Orthopedics (5)
 - f. Pediatrics (6)
 - g. Sports (7)
 - h. Women's Health (8)
 - i. I am not planning to become a certified clinical specialist (9)
10. In what type of setting do you primarily practice?
 - a. Acute care (1)
 - b. Extended Care Facility /Nursing Home/Skilled Nursing Facility (2)
 - c. Home Health (3)
 - d. Hospice (4)
 - e. Industrial, Workplace, or Other Occupational Environments (5)
 - f. Local, State, and Federal Government (6)
 - g. Outpatient Clinic (7)
 - h. Rehab/subacute (8)
 - i. Research Center (9)

- j. School/Preschool (10)
- k. Wellness/Prevention/Sports/Fitness (11)
- l. Current Student (not practicing yet) (12)

11. (If they select current student) what specific area and/or setting are you currently interested in physical therapy?
- a. Acute care (1)
 - b. Extended Care Facility /Nursing Home/Skilled Nursing Facility (2)
 - c. Home Health (3)
 - d. Hospice (4)
 - e. Industrial, Workplace, or Other Occupational Environments (5)
 - f. Local, State, and Federal Government (6)
 - g. Outpatient Clinic (7)
 - h. Rehab/subacute (8)
 - i. Research Center (9)
 - j. School/Preschool (10)
 - k. Wellness/Prevention/Sports/Fitness (11)

Residency and Future Career Path Questions

12. The presence of a residency and fellowship program positively influenced my DPT education experience at ETSU.
- a. Strongly agree
 - b. somewhat agree
 - c. neither agree nor disagree
 - d. somewhat disagree
 - e. strongly disagree
13. The presence of an orthopedic residency and fellowship program influenced me to pursue a residency or fellowship (regardless of the type).
- a. Strongly agree
 - b. somewhat agree
 - c. neither agree nor disagree
 - d. somewhat disagree
 - e. strongly disagree
14. The presence of a residency or fellowship program influenced me to pursue an orthopedic residency or fellowship.
- a. Strongly agree
 - b. somewhat agree
 - c. neither agree nor disagree
 - d. somewhat disagree
 - e. strongly disagree
15. The presence of a residency or fellowship program influenced me to pursue an orthopedic residency or fellowship with ETSU's program.
- a. Strongly agree
 - b. somewhat agree
 - c. neither agree nor disagree
 - d. somewhat disagree
 - e. strongly disagree