



Perspectives on Advising in DPT Education: Opportunities for Growth and Improvement

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Abstract

Academic advising is crucial in education, yet best practices and outcomes are underexplored in physical therapy education. This study examines how Doctor of Physical Therapy students, alumni, and faculty perceive advising experiences and identify improvement areas.

Subjects: 114 survey participants and 17 focus group participants from a midwestern physical therapy program.

Methods: A mixed methods design with an 18-item survey and four semi-structured focus groups.

Results: Advisees showed more disagreement than advisers on the following: "helping advisees with non-academic concerns" (RES 3); "being successful in their academic program" (OUT3); and "helping to achieve their career goals" (OUT4). Advisees had more agreement than advisers on "advisees are responsive in their communication with advisors" (LOG4). Qualitative analysis revealed themes of structure, similarities, support, and relationship building.

Conclusion: Students value advising but seek more structured, personalized experiences. Effective advising should balance structured resource allocation with flexible, supportive relationships.

Keywords: Advisee-Advisor Relationships, Mentorship, Physical Therapy Education

Introduction

Academic advising is an important aspect of an educational experience. Experiences greatly vary and there is currently limited to no literature describing these practices within doctoral level graduate programs. This is even more limited within the physical therapy profession. This study aims to investigate how Doctor of Physical Therapy Students and faculty characterize their experience with the academic advising program and to identify opportunities for improvement in future program implementation.

Historical definitions of academic advising include descriptions of a collaborative, dynamic relationship, where the adviser serves as teacher and guide to facilitate students' achievement of educational, career, and personal goals. Most healthcare professionals have likely interacted with at least one academic adviser during their higher educational journey. It is also likely that perceptions about the format, content, and success of everyone's academic advising experiences are unique. Existing literature provided descriptions of student advising in baccalaureate healthcare programs including in allied health [1] and nursing [2]. Advising in professional health education programs has also been described in dentistry [3, 4], pharmacy [5, 6], medicine [7-10], and medical specialties/residency selection and training [11-13].

While there is considerable literature on multiple aspects of physical therapy education, including curricula [14-18], faculty [19-21], teaching and learning strategies [22-24], and outcomes [25, 26], there is a paucity of literature on academic advising in physical therapy [27]. The Commission on Education in Physical Therapy Education (CAPTE) reported 273 accredited physical therapy education programs in 2022. An additional 21 programs were in the development/candidacy phase. Given the scale of physical therapy education, the number of current physical therapy students, and the fact that physical therapy student academic advising is understudied and underreported, there is both a need and an opportunity to better understand this experience.

The Department of Physical Therapy and Human Movement Sciences in the Feinberg School of Medicine at Northwestern University (PTHMS) has a 39-member faculty, enrolls 90-95 students per class in a 32-month educational program culminating in the Doctor of Physical Therapy (DPT) degree. Physical Therapy and Human Movement Sciences created a task force to review the DPT program and learning environment to explore strategies to promote student success. The task force sought student and faculty feedback and identified nine actionable recommendations to enhance student

support and success. One of the nine recommendations highlighted a need for a revised advising system including: variability in student experience and relationships with advisers, desire for a team-based model, and desire to have advisers with connections to the students' potential long-term clinical interests.

At the beginning of the project, all students were assigned a faculty academic adviser at matriculation. Assignments were made by admissions-committee members based on interactions with incoming students and a match between student-faculty characteristics. All full-time faculty were expected to serve as advisers to 2-4 students/class. Advisers met with students at the onset of the program and then typically each academic term (or more often as needed) before their terminal clinical education experiences.

In the summer of 2020, the PTHMS curriculum committee placed a call for interested faculty volunteers to participate in an Advising Subcommittee (AS). It consisted of four faculty members with diversity in teaching experience, rank and role, and content expertise. The Department's Curriculum Committee charged the AS to review training and expectations for faculty in their role as an adviser and make recommendations.

The AS conducted a literature review on academic advising in PT showing that a limited amount had been written about the topic. To inform the work, the taskforce met with two experts in student advising in health professions education [28]. Numerous methods for exploring the topic of academic advising were discussed. All directed the AS to complete an initial needs assessment of the status of academic advising at PTHMS.

The purpose of this study was to investigate how Doctor of Physical Therapy Students and faculty characterize their experience with the academic advising program. A secondary purpose of this study was to identify opportunities for improvement in future program implementation.

Subjects

Subjects from survey: 114 survey participants included 24 faculty, 12 recent graduates (within the year), and 78 current students. Current students were further divided into three groups: class of 2021 (n=17), 2022 (n=40), and 2023 (n=21). Additionally, seventeen focus group participants included: Class of 2021 alumni (n=5); Class of 2022 DPT students (n=2); Class of 2023 DPT students (n=4); and PTHMS core faculty members (n=6).

Methods

A mixed methods study was employed to ensure the benefits of both approaches were included in the results. The quantitative portion allowed a broader examination of the program while the qualitative

semi-structured interviews allowed the researchers to gain a more nuanced understanding of this complex phenomenon. The mixed methods approach allowed for a more granular examination of students, faculty, and alumni perceptions on the personal topic of advising.

Since there was not a standardized survey specific to this topic available within the literature, an online survey instrument was developed based on discussions with experts and informed by two published examples [7]. A survey including four categories consisting of 18-items was created to query respondents' perceptions of adviser access, and experiences with academic and non-academic issues, behaviors, benefits, and career goals. Items were scored on a 7-point Likert scale of agreement (strongly agree <-> strongly disagree). The survey included a free text box for additional comments not captured in other survey questions. To establish face validity, program students and faculty members were invited to view the survey and provide feedback. Minor revisions were made to the survey instrument based on that feedback. The survey was managed using REDCap electronic data capture tools hosted at Yale University. A link to the online Advisor-Advisee survey was emailed to faculty and students from the 2020-2023 classes in the beginning of September 2021. Table 1 displays the survey items.

Following analysis of the online survey data, semi-structured focus groups were conducted to elicit further information regarding factors identified in the online survey. The participants in the semi-structured focus groups were separated between students, faculty, or alumni. The AS partnered with a focus group facilitator who was experienced in quantitative inquiry, skilled in conducting focus groups, and familiar with PTHMS curriculum and faculty. The facilitator did not have a formal role in the department to provide a safe environment for students and faculty to openly share their experiences. The focus group facilitator met with the AS several times to reach agreement on the goals, structure, format, and specific questions for the focus groups. The appendix contains the focus group interview guide.

Results

Quantitative Survey Results

Table 1 shows the categories examined, the Cronbach alpha score for each category, the items (survey questions) within each category along with each item's label, the number of individuals within each respondent group, and the central tendencies (mean and median) plus variability (SD and range, respectively) for each respondent group for each item. Each question was identified with one of four categories; logistics of the program (LOG), resources offered within the program (RES), program support of belonging and inclusion (BAI), and outcome of the program (OUT) as shown in Table 1.

Table 1. Survey Items and Descriptive Statistics

Category	α^a	Item label	Item	n		Mean (SD)		median (range)	
				advisor	advisee	advisor	advisee	advisor	advisee
Logistics	0.84	LOG1	ADVISORS devote sufficient time to advise students	24	90	4.67 (1.37)	5.11 (1.67)	5 (2-7)	5 (1-7)
		LOG2	ADVISEES have sufficient access to their ADVISORS	24	90	4.75 (1.29)	4.81 (1.73)	4.5 (3-7)	5 (1-7)
		LOG3	ADVISORS are responsive to communication from ADVISEES	24	90	5.46 (1.44)	5.63 (1.55)	6 (3-7)	6 (1-7)
		LOG4 ^b	ADVISEES are responsive to communication from ADVISORS	24	90	5.67 (1.24)	5.71 (1.55)	6 (3-7)	6 (1-7)
Resources	0.93	RES1	ADVISORS help ADVISEES with their academic concerns	24	88	5.04 (1.43)	6.13 (0.94)	5 (3-7)	6 (3-7)
		RES2	ADVISORS provide ADVISEES with resources to address their academic concerns	24	88	6.46 (0.88)	6.07 (1.24)	7 (4-7)	6 (1-7)
		RES3	ADVISORS help ADVISEES with their non-academic concerns	24	90	5.42 (0.88)	5.52 (1.57)	5 (4-7)	6 (1-7)
		RES4	ADVISORS provide ADVISEES with resources to address their non-academic concerns	24	87	5.71 (0.95)	5.37 (1.59)	6 (4-7)	6 (1-7)
Belongingness and inclusion	0.85	BAI1	ADVISORS want to help ADVISEES with their concerns	24	85	5.54 (0.98)	5.27 (1.62)	6 (4-7)	6 (1-7)
		BAI2	ADVISORS exhibit respectful behavior during their interactions	24	87	5.17 (1.17)	5.03 (1.81)	5 (3-7)	6 (1-7)
		BAI3	ADVISEES exhibit respectful behavior during their interactions	24	83	5.04 (1.20)	4.96 (1.84)	5 (3-7)	5 (1-7)
		BAI4	ADVISORS and ADVISEES have a good relationship	24	88	6.54 (0.78)	6.60 (0.72)	7 (4-7)	7 (3-7)
		BAI5	ADVISORS help ADVISEES feel like they belong at PTHMS	24	85	6.46 (0.78)	6.60 (0.68)	7 (4-7)	7 (4-7)
Output	0.93	OUT1	The advising program at PTHMS meets the needs of the students	24	89	5.33 (1.09)	5.72 (1.48)	5.5 (3-7)	6 (1-7)
		OUT2	ADVISEES benefit from discussions that they have with their ADVISORS	24	90	5.33 (1.05)	5.39 (1.69)	5 (4-7)	6 (1-7)
		OUT3	ADVISORS help ADVISEES be successful within PTHMS	24	90	5.33 (1.13)	5.19 (1.80)	5 (4-7)	5.5 (1-7)
		OUT4	ADVISORS help their ADVISEES with their career goals	24	90	5.08 (1.21)	5.29 (1.81)	5 (3-7)	6 (1-7)
Overall ^c		OVERALL	Please rate your overall satisfaction with the advising program at PTHMS	24	90	4.50 (1.47)	4.84 (1.85)	5 (2-7)	5 (1-7)

^adenotes Cronbach's alpha for each category

^bRed font indicates a significant difference was found between advisors and advisees

^cOverall was treated as a stand-alone item and not part of any scale or category

Table 1: Table 1 shows the categories examined, the Cronbach alpha score for each category, the items (survey questions) within each category along with each item's label, the number of individuals within each respondent group, and the central tendencies (mean and median) plus variability (SD and range, respectively) for each respondent group for each item. Red font in the item label denotes that a significant difference was found between advisors and advisees.

Figure 1A shows the distributions for each item. A Kruskal-Wallis test showed no statistically significant differences between any of the student respondent groups, including the recent graduate group, in rating the individual items so the student groups were merged. A Mann-Whitney U test was conducted to determine whether there were any significant differences between advisors and advisees. The results showed that advisors scored significantly lower than advisees on “advisees are responsive to communication from advisors”

(LOG4: $U=588.00$, $p=<0.001$) and “advisors and advisees have a good relationship” (BAI4: $U=794.00$, $p=0.046$).

Items within a category were averaged to give the category score. An ANOVA showed that there were no statistically significant differences between any of the student respondent groups, including the recent graduate group, in category score so the student groups were merged. T-tests revealed no significant differences between advisors and advisees in each category (Figure 1B).

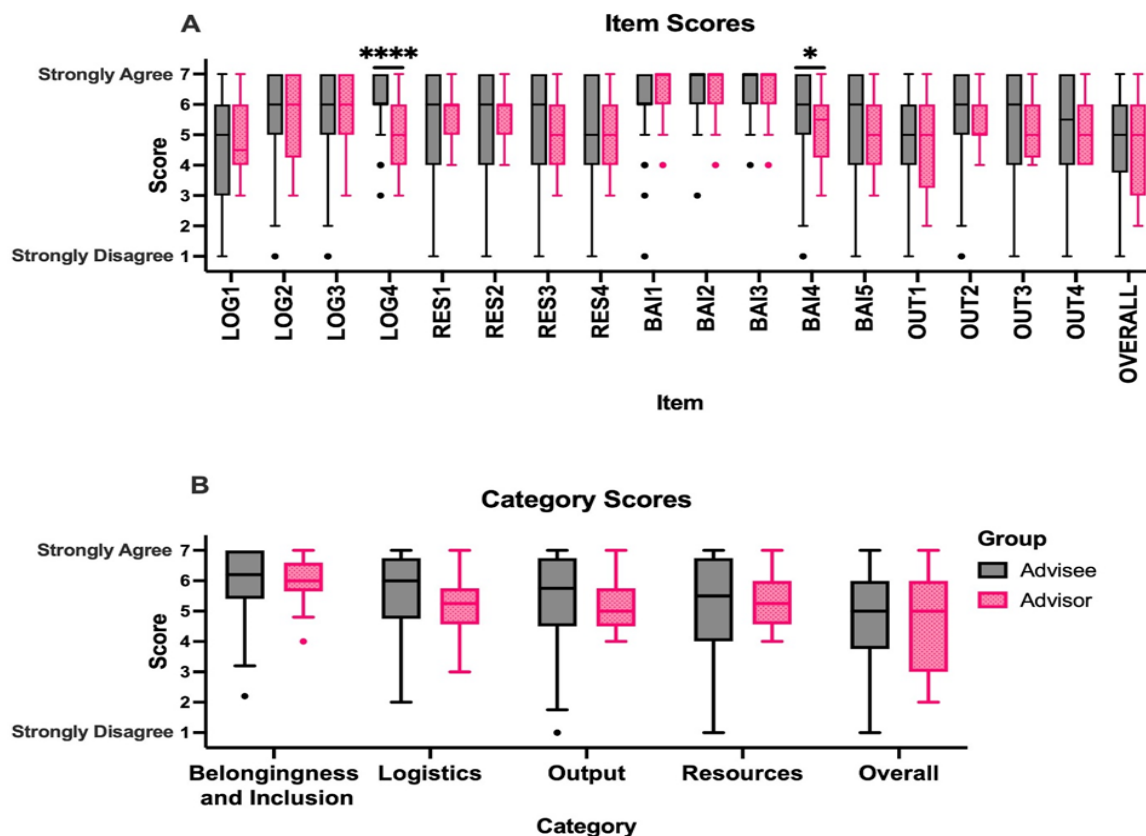


Figure 1: Figure 1A shows the distributions for each item within the survey. All student responses were pooled as there were no significant differences between the groups. There were no differences between advisor and advisee responses to the items except for LOG4 ($U=588.00$, $p=<0.001$) and BAI4 ($U=794.00$, $p=0.046$) where advisors scored significantly less agreeable than advisees (Mann-Whitney U). Figure 1B shows a comparison between advisor and advisee responses across the categories for which there were no significant differences (t-test). Figure 1B also shows the response from the uncategorized overall question (Overall).

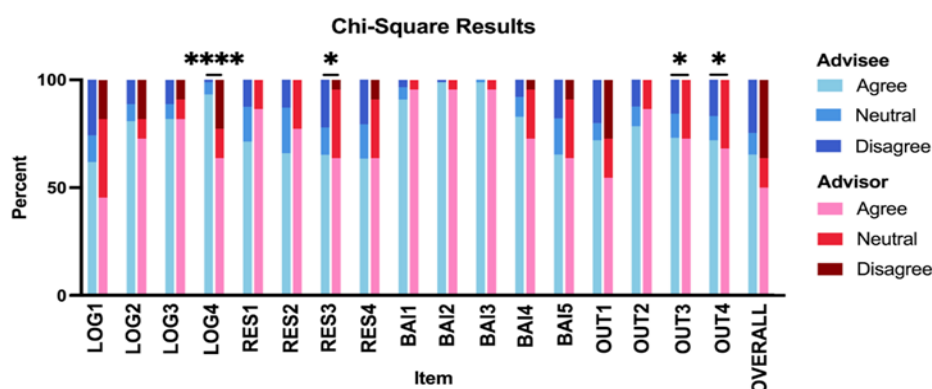


Figure 2: The directionality of responses to the items was analyzed. Results showed that advisees had more association with disagreement than advisors on RES3 ($\chi^2=6.431$, $df=2$, $p=.040$) OUT3 ($\chi^2=6.345$, $df=2$, $p=.042$), and OUT4 ($\chi^2=8.147$, $df=2$, $p=.017$). However, advisees had more association with agreement than advisors on LOG4 ($\chi^2=16.399$, $df=2$, $p=<0.001$) (chi-square).

A follow-up analysis was conducted to examine the directionality of the responses. Answers were collapsed into the nominal variables of agreement (responses of 5-7), neutral (response of 4), and disagree (responses of 1-3). A chi-square test of association was conducted to evaluate the relationship between group (advisor or advisee) and the nominal categories. Results showed that advisees had more association with disagreement than advisors on “advisors help advisees with their non-academic concerns” (RES3; $\chi^2=6.431$, $df=2$, $p=.040$); “advisors help advisees be successful within PTHMS” (OUT3; $\chi^2=6.345$, $df=2$, $p=.042$); and “advisors help their advisees with their career goals” (OUT4; $\chi^2=8.147$, $df=2$, $p=.017$). However, advisees had more association with agreement than advisors on LOG4 ($\chi^2=16.399$, $df=2$, $p<.0001$).

Qualitative Focus Group Results

The quantitative analysis produced an overview of the advisor-advisee relationship. However, question 20, which asked their overall view of the program, scored less agreeable than the other items. This prompted additional qualitative analysis to elucidate specific improvements for the program.

Focus groups were conducted between February and March of 2021 by Zoom, audio recorded, and transcribed. Zoom was used to facilitate participation. The mean length of the four focus groups was 77 minutes (range 62-95 minutes). Three study investigators read and independently coded one of the transcripts. The three met, discussed their codes, and came to consensus on a coding schema for the remaining three transcripts. Codes were condensed into subthemes and themes.

The following four themes were identified: Structure, Similarities, Supportive, and Relationship Building. Figure 3 graphically displays the four themes and their corresponding subthemes. Table 2 presents illustrative quotes for each subtheme.

The first theme to emerge from the inductive coding process was titled “Structure.” All four focus groups commented on the structure or rather lack of structure in the existing academic advisory program. The qualitative coding process revealed three subthemes which described focus group participants’ perceptions of the advisory program’s structural strengths and areas for improvement.

Subtheme one was titled “Built into the System.” Overall, participants felt the existing academic advisory program was not

integrated into the broader context of the DPT program. The adjunct status of the advising program was exemplified by a lack of structured meeting times, other program responsibilities taking priority, and a subsequent lack of availability of both faculty and students to commit to the advising program.

Subtheme two was titled “Set Expectations.” Both faculty and student focus group participants shared the perception that expectations in the academic advisory program were unclear. Neither faculty nor students understood what the expectations for the content nor schedule of the meetings. Some felt it was the faculty’s responsibility to reach out while others felt that responsibility fell to the individual student. This lack of clarity led to perceived inconsistencies in how faculty and students managed their advisor/advisee relationships. The lack of clear expectations resulted in each group making assumptions about the other.

Subtheme three was titled “Has Resources.” Participants felt the structural shortcomings of the program were the result of insufficient resources. Participants noted a lack of free time to devote to quality interactions led to a perception by students that academic advising was not a priority. The absence of a structured mechanism for information sharing left faculty wondering when or if an individual advisee might need additional attention. Faculty felt additional training on DPT program expectations, advising techniques, and available resources would be helpful, while students noted that not all faculty appeared “cut out” to be advisors.

Theme two – similarities

The second theme identified in the coding process was titled “Similarities.” Both students and faculty expressed a desire for similarity between advisor and advisee. While the desire for shared professional identity (physical therapist, as opposed to non-clinical research faculty) was present, this theme was more expansive than professional identity alone.

The first subtheme was titled “Background.” This subtheme was prevalent in the student focus groups. Students expressed a desire for faculty from similar backgrounds, including shared racial or ethnic background, but also shared life experiences. Shared life experience could include a shared undergraduate school or geographic location where one was raised or lived.

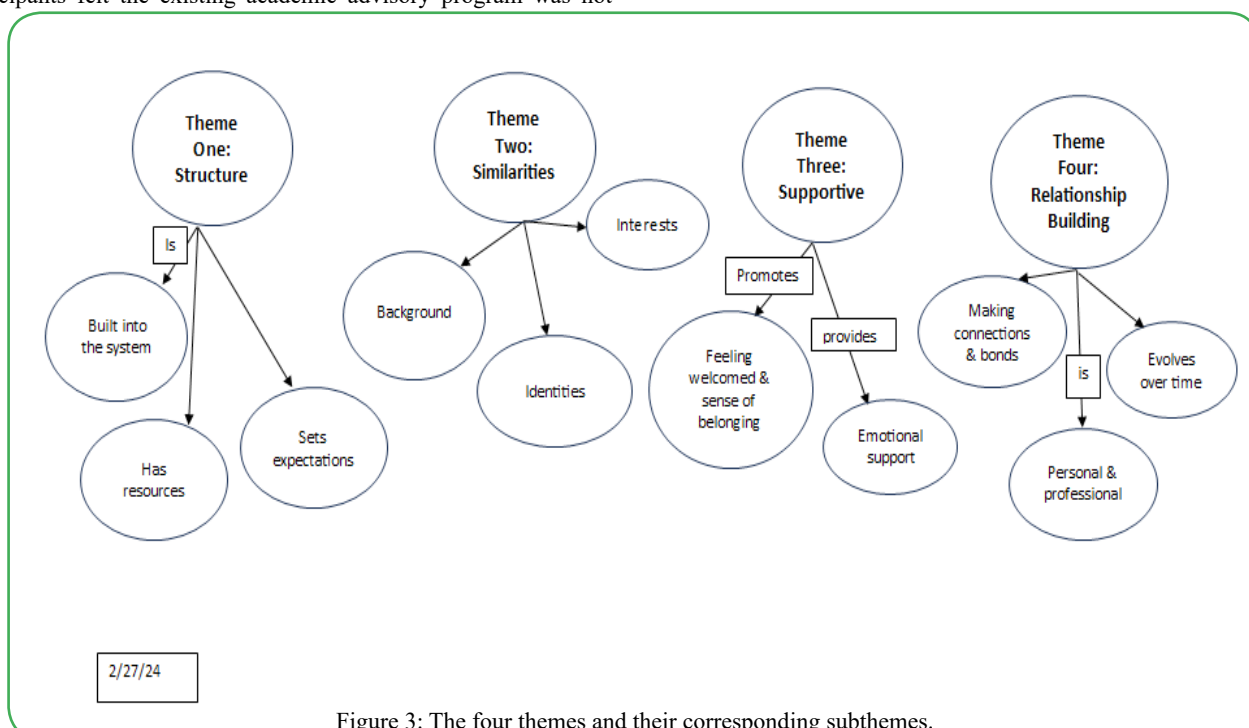


Figure 3: The four themes and their corresponding subthemes.

Theme	Subtheme	Illustrative Quote
Structure	Built Into System	... faculty ... this is a reminder you have your 30-minute meeting with your students this week, it's already blocked on your calendar. Or maybe when we learn who our advisor is, it's just predetermined, ... we're going to meet once [on] this date. And then once this date. And then it's done and it takes some of the ambiguity out of it. (Alumni)
	Improved Resources	I think not necessarily everyone should be an advisor. (Alumni)
	Setting Expectations	I always offer ... just let me know if you want to chat about something. And most of the time they don't really take advantage of that. And I generally assume it's because they're doing fine. (Faculty)
Similarities	Background	I feel like I was also lucky to have my mentor being the same race. We always had some conversations regarding that, so it just worked out. But that was something that we shared and I think that made our work relationship stronger too. (CO 22 student)
	Identity	My advisor is actually not a PT...that's kind of a challenge. I have a lot of questions right now and I just don't think she could answer them...I don't really use my advisor at all. (CO 23 student)
	Interests	At least for me, common interest was a big one. I was really interested in the neuro population with regards to physical therapy. So I know that I sought out a lot of relationships with our neuro faculty...that was definitely the biggest one. Just common interest. (Alumni)
Supportive	Feeling Welcomed and a Sense of Belonging	...just getting to know each other, like get together with food or coffee... no set purpose or agenda, other than to get to know you. That would, I think, strengthen that. (CO23 student)
	Emotional Support	The one instance where I failed a test, I feel like I didn't know who to turn to ... well, I have this advisor ... I emailed her freaking out like, oh, can we talk about this? She was like, yes, come into my office, it's fine, and talked me through it. It made me feel very supported and like I had a place to go. (CO 22 student)
Relationship Building	Making Connections and Bonds	I feel like it was definitely something I was hoping to have more of a connection with. I feel like I've made other connections with other faculty here, but I think that I don't really have a relationship with my advisor. (CO 23 student)
	Personal and Professional	It felt like a real relationship. It was like she was getting some things from me and I was getting things from her, which I think it's good in a mentoring relationship (CO 22 student)
	Evolves Over Time	...perhaps in the second year is a stronger relationship than in the first year. And I think when I was talking, I was saying in the first year, perhaps I have more an advisor/advisee relationship, in the second year, sometimes it turns into more. (Faculty)

Table 2. Themes/Subthemes and Illustrative Quotes

The second subtheme was titled "Identities." Most notable in this subtheme was the desire for a shared professional role identity. Student focus group participants noted how an academic advisor who was not a physical therapist, a non-clinical research faculty for example, affected their ability to connect with the advisor as a student in a clinically focused doctoral program. Identity similarities expanded beyond professional identity, however, with participants noting the importance of social connection and perceived approachability as key components of the advisor's identity contributed to their willingness to access their assigned advisor, versus seeking other sources of information or connection.

The third subtheme was titled "Interests." Similar interests in an area of clinical practice specialty were a common desire expressed by students. Students felt this commonality led them to access their advisor more as the program progressed from classroom to clinical work to career planning. Focus group participants compared the advisory program with their involvement in a required faculty-guided research project. Possessing a shared interest increased faculty and student investment in the relationship. This shared interest was noted

regardless of whether the faculty research advisor was a physical therapist or not which made this aspect of subtheme three distinct from subtheme two.

Theme three –supportive

The third theme was "Supportive." Participants reported the advising program should support students' tenure and training in the PTHMS community. Whether or not the advising program was successful in this role varied by individual participant experience. Two subthemes further described the importance of the advising program to make students feel welcomed and provide emotional support.

The first subtheme was titled "Welcome and Belonging." Participants described how students expected the role of the faculty advisors was to reach out and make them feel welcomed. The advisor's performance also played an important role in whether students felt a sense of belonging. When asked what role the advisee-advisor relationship played in developing a sense of belonging, several faculty participants felt this should happen but, despite efforts, did not.

A second subtheme was titled “Emotional Support” and related to the ability of advisors to provide emotional support during challenges faced in DPT training. One faculty member reported their role as another level of support, as a safety net, while student participants felt academic advisors should support them in more than just areas of academic performance and success.

Theme four –relationship building

The fourth theme was titled “Relationship Building.” This theme described a desired component of the advising program to establish an ongoing and progressively maturing relationship.

The first subtheme that emerged was titled “Making Connections and Bonds.” Several participants explained how the advisor may play an important role in making connections and directing students to others and resources that align with students’ interests. Making these connections with students was viewed as rewarding and positive by faculty and the first step in relationship-building.

The second subtheme was titled “Personal and Professional.” This subtheme described how students wished to connect with faculty on both the personal and professional level. Having a supportive advisor with shared interests and backgrounds was felt to be important to the development of this relationship.

The third subtheme was titled “Evolves Over Time” and represented participants’ perceptions that the advising program should progressively mature and evolve as the student progressed through the program. Ideally, students should require less advisement on matters of rote academic performance and benefit from more attention to maturation as a budding professional and future colleague as the students’ progress through the DPT program. The results of the qualitative data analysis are visually represented in Figure 3. Illustrative quotes for each theme are presented in Table 2.

Discussion and Conclusion

The primary focus of this study was to evaluate the advisor-advisee relationships within a graduate physical therapy program and to identify areas of improvement for both students and faculty experiences. The research employed a mixed-methods approach by combining quantitative surveys and qualitative focus groups to provide a comprehensive view of the advising program’s effectiveness.

The internal consistency of the quantitative survey items was assessed by measuring Cronbach’s alpha (Table 1) for the categories to which they belong. The alpha values for each category were quite high, all >0.8 , suggesting high reliability of the survey items. Initial survey results provided an overall positive assessment of the advising system as observed in the central tendencies of the items shown in Table 1, all of which were above a neutral score of 4, and the even higher mean category scores shown in Fig. 1B. However, discrepancies emerged when evaluating specific items within the survey, including the overall satisfaction ratings in particular. The initial quantitative findings indicated that while students generally found the advising program beneficial, there was significant room for improvement. This finding was consistent across multiple survey items. The Mann-Whitney U tests showed significant differences between advisors and advisees on LOG4 and BAI4 (Fig. 1A), suggesting differences in perspectives regarding communication and quality of relationships respectively. From these results, we would recommend that advisors within this program could improve outcomes if they encourage more communication from their advisees and work on and encourage the development of better relationships. The chi-square tests of association showed differences in LOG4 and three other items: RES3, OUT3, and OUT4 (Fig. 2). From these results, we would recommend that advisors within this program could improve outcomes if they put more effort into addressing

non-academic concerns (RES3) and focus more on their advisees’ expectations of success within (OUT3) and beyond (OUT4) the program.

The discrepancies just discussed can point to specific areas of improvement, but they do not address the unknowns—potential items or categories that are not addressed by the survey. In this regard, one key result stood out: the overall satisfaction score was lower than all individual item and category scores, signaling a need to understand the underlying causes of this discrepancy. This led to the inclusion of qualitative methods, allowing the researchers to delve deeper into the experiences of both students and faculty through focus groups. The use of focus groups aligned with existing literature on advising systems, which suggests that qualitative data often provide richer insights into student and faculty experiences.

The focus group discussions revealed that students desired a more structured and personalized advising experience that went beyond academic performance monitoring. The qualitative themes that emerged highlighted a preference for relationships that were built on shared interests and identities, allowing the advisor-advisee relationship to evolve into a more personal and professional connection over time. This academic relationship has been shown to be beneficial in the education of other healthcare professions in physical and psychological well-being of students during their graduate medical education [29]. This desire for a deeper relationship was found to contribute to the lower overall satisfaction scores, despite positive responses to more specific elements of the advising process. This is supported in the current literature as similar studies support that the safety of the learning environment, strength of the mentee-mentor relationship, and preparing for the mentorship meetings were the most important factors associated with the intended outcomes of mentoring of early career mentorship within physical therapy [30].

These findings point to the need for an advising program which balances a structured approach to resource allocation, advisor/advisee matching, and program expectations, with sufficient flexibility to allow supportive advisor/advisee relationships to develop and evolve organically over time. For example, a key action step taken as a result of the data in this study is the introduction of a formalized mentor-mentee program, as seen in the newly implemented Professional Development and Mentoring Program. This program is designed to foster long-term relationships between faculty mentors and students, facilitating personal and professional growth. Future iterations of advising programs may benefit from focusing on matching advisors and advisees based on shared backgrounds or interests, a factor highlighted in this study as essential for deeper connections to better facilitate the desired physical and psychological wellbeing benefits of the advisee program [31].

Given the study’s limitations of being focused on a single institution and the potential biases in volunteer focus group participation, the results cannot be generalized to all Doctor of Physical Therapy (DPT) programs. However, the findings emphasize the importance of addressing the evolving needs of both students and faculty in the advising process and could serve as a foundational example for other DPT programs to consider when implementing mentorship programs within their institutions.

Competing Interests: The author(s) declare that they have no competing interests.

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