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Exploring a "Goldilocks Zone" for Clinical Education? Clinical Faculty Perspectives on Placement Duration in Physical Therapist Education

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Abstract

Background: Clinical placements are a cornerstone of workplace-based learning in the health professions, yet limited evidence exists to guide decisions regarding the duration of clinical education experiences (CEEs). This study explored and described clinical faculty perspectives regarding the length of CEEs within physical therapist education. Methods: Thirty-one clinical faculty representing diverse practice settings and geographic regions participated in eight focus group interviews. Qualitative analysis was conducted to identify themes related to the perceived impact of CEE duration on student learning and performance. Results: Three themes emerged: (1) adequate time supports student development, (2) consequences of excessively long CEEs, and (3) consequences of insufficiently short CEEs. Clinical faculty described adequate time as essential for professional development, clinical reasoning, practice management, confidence, and progressive independence. CEEs perceived as insufficiently short, limited opportunities for feedback, observation, and development. Excessively long CEEs were associated with redundancy, student disengagement, and diminishing educational returns. During focus group discussions, clinical faculty frequently described 10–12 weeks provided adequate time for student development. Conclusions: Clinical faculty perceived time as an important facilitator of student development and identified a potential conceptual "Goldilocks Zone" in which CEEs provide sufficient opportunities for growth without unnecessary redundancy. These findings may inform discussions regarding clinical education across the health professions.

Keywords: clinical education; workplace learning; faculty perspectives; program length; curriculum design

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1. Introduction

Workplace-based clinical learning is widely recognized as a critical component of health professional education, providing students opportunities to apply knowledge, develop practical skills, and socialize into their chosen profession [1,2]. Across health professions, workplace-based clinical learning occurs through placements, referred to in physical therapist (PT) education as clinical education experiences (CEEs), where students engage in authentic patient care under the supervision of experienced clinicians [3]. These

CEEs play a vital role in helping students integrate foundational knowledge with clinical reasoning, develop professional identity, and prepare for independent practice [4,5].

Throughout PT education, full-time CEEs are a central component of professional preparation. The Commission on Accreditation in Physical Therapy Education (CAPTE) requires accredited programs to provide a minimum of 30 full-time weeks (1050 h) of CEEs, typically comprising approximately 25% of the PT curriculum [6–8]. Given the substantial curricular time, financial resources, and clinical site commitments devoted to these experiences, decisions regarding the design and duration of CEEs have important implications for students, academic programs, and clinical partners. Yet considerable variability exists in how PT programs structure clinical education. Programs differ in the total number of weeks (30–56.6 weeks) [8], timing, sequence, and duration allocated to CEEs [9]. Similar variation has been reported across the health professions, where CEEs are often influenced by accreditation requirements, institutional traditions, and placement availability [10,11].

Despite widespread agreement regarding the value of CEEs, uncertainty remains regarding the role of time in student learning and development. Some evidence suggests that longer CEEs enhance students' confidence, competence, and readiness for clinical practice [12,13]. Clinical faculty have reported that longer experiences provide greater opportunities for comprehensive learning, management of patients across a full episode of care, and the development of clinical competence and independence [14–16]. More recently, academic and clinical faculty identified preferred full-time CEE lengths of approximately 8–13 weeks [17]. However, the survey-based study did not explore the experiences and reasoning underlying academic or clinical faculty's preferred CEE durations. Collectively, these findings suggest that adequate time may play an important role in facilitating student growth during workplace-based clinical learning.

Others have questioned whether extending CEEs beyond a certain point leads to meaningful educational benefits. Excessive duration may contribute to redundancy, inefficient use of educational resources, and diminishing student engagement [18,19]. These concerns have coincided with growing interest in competency-based education (CBE), which emphasizes demonstrated readiness for practice rather than predetermined periods of training [20]. As PT education explores competency-based frameworks, including domains of competence and entrustable professional activities for entry-level practice, questions remain regarding the extent to which time-based clinical education requirements are necessary to support student development [21,22]. However, because CEEs remain constrained by clinical site capacity, curricular structures, and accreditation requirements, clinical learning experiences continue to be organized largely around time-based expectations.

The uncertainty surrounding the appropriate duration of CEEs is not confined to PT education. Educators continue to grapple with balancing time-based requirements and competency-based expectations, and similar questions regarding the structure and duration of clinical placements have been identified across the health professions [23–26]. Accreditation standards often prescribe minimum clinical training requirements [6,23–25], yet little evidence exists regarding the educational value associated with specific clinical placement durations. Given their central role in shaping and delivering CEEs, clinical faculty are uniquely positioned to provide insight into how the duration of these experiences influences student learning and performance.

The purpose of this study was to explore and describe clinical faculty perspectives regarding the duration of full-time CEEs within PT education. Through focus group interviews, clinical faculty described what is accomplished when CEEs provide adequate time, as well as the perceived consequences of experiences that are too long or too short.

2. Materials and Methods

This study was reviewed and approved by the University of Jamestown Institutional Review Board (IRB ID: 030PT-2023). Informed consent for participation was distributed and signed by all participating clinical faculty. Our study followed the Consolidated Criteria for Reporting Qualitative Research (COREQ; Table S1) [27]. Clinical faculty (Site Coordinators of Clinical Education [SCCEs] and Clinical Instructors [CIs]) from across the United States were invited to participate in a focus group interview to explore their experiences and perspectives regarding the length of full-time CEEs. To recruit participants, we directly contacted clinical faculty, requested Directors of Clinical Education and Clinical Education Consortium Chairs to disseminate study information, and asked participating clinical faculty for recommendations of potential participants. Clinical faculty (n = 108) who expressed interest in participating in an online focus group interview were subsequently sent an electronic pre-focus-group survey. The pre-focus-group survey collected information about participants' age, clinical faculty experience, role as a CI or SCCE, geographic region, primary practice setting, and experience with CEEs of varying durations. The pre-focus-group survey also included an item asking clinical faculty to report the perceived optimal length for a full-time CEE. The pre-focus-group survey responses were used to describe the clinical faculty participants. The research team reviewed survey responses and used purposive, maximum-variation sampling to select participants representing diverse practice settings, clinical faculty roles, geographic regions, and experiences with CEEs of different durations. Of the 59 clinical faculty who completed the survey, 44 were invited to participate. Thirty-two clinical faculty participated in one of eight focus groups. During the focus group discussions (Middle Atlantic Region), one participant was determined not to meet the study's inclusion criteria based on information disclosed. Data from this participant were excluded from analysis. The final sample included 31 clinical faculty. The participant recruitment and selection process is presented in Figure 1.

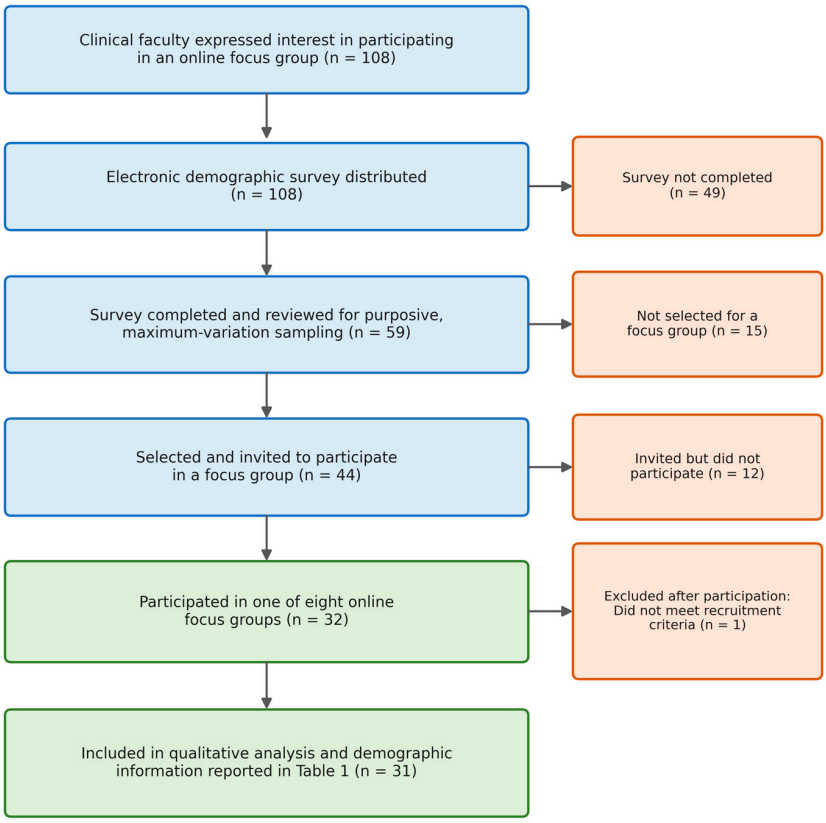


Figure 1. Participant recruitment flow diagram.

2.1. Instrumentation

Upon completion of the pre-focus-group survey, the study team purposively selected participants by reviewing clinical practice setting, role (SCCE or CI), and geographic region to ensure diversity across focus groups. To enhance geographic diversity and maximize variation in participant perspectives, we used the eight geographic regions commonly used by CAPTE (West North Central, South Central, South Atlantic, Pacific, New England, Mountain, Middle Atlantic, and East North Central) to organize recruitment efforts and ensure representation from across the United States. We sought to invite at least five clinical faculty from each region to participate in a focus group. Qualitative data collection for this project occurred through online semi-structured focus group interviews designed to garner insights regarding the length of full-time CEEs. Interview guides were developed and used for data collection. All focus group interviews (~60 min) consisted of the same open-ended questions (Table S2). Experienced members of the research team (TH, AR) led the focus group interviews and took field notes throughout. Focus groups ranged from two to six participants. One participant was subsequently excluded after participation (Middle Atlantic Region) because the individual did not meet study recruitment criteria. The final analytic sample consisted of 31 clinical faculty across eight focus groups.

2.2. Data Collection and Analysis

Data were analyzed using an inductive thematic analysis informed by a constant comparative approach. Thematic analysis served as the primary analytic method for identifying patterns and themes across participant responses, while constant comparison was used throughout coding and theme development to compare newly analyzed data with existing codes and emerging themes. This process was used to refine the codebook and thematic structure rather than to generate a grounded theory. All authors participated in the analytic process except where otherwise noted. Analysis proceeded through six iterative steps:

1. Focus groups were transcribed using Zoom transcription software (Zoom Video Communications, Inc. Version 6.0, 2025, San Jose, CA, USA), reviewed for accuracy, and imported into MAXQDA 2022 (VERBI Software, 2024, Berlin, Germany) for data management and analysis.
2. A minimum of two authors listened to the focus group recordings and read and re-read the transcripts to become familiar with the data. During this process, authors recorded memos documenting observations, recurring and emergent concepts, connections, and potential codes.
3. The research team inductively developed an initial set of codes from the focus group data. During synchronous, in-person group discussions, authors compared their initial observations and proposed codes, resolved differences through discussion, and reached consensus on an initial codebook.
4. Two-person coding teams asynchronously applied the initial codebook to the remaining transcripts. Newly coded excerpts were continually compared with previously coded quotes. When the data did not align with an existing code or suggested a distinction between concepts, the coding teams proposed adding, combining, separating, or revising codes. Proposed codebook changes were reviewed by the full research team and adopted through consensus before being applied across the dataset.
5. The full research team reviewed patterns and relationships among the codes and grouped conceptually related codes into candidate themes and subthemes. Candidate themes were compared with coded excerpts and across focus groups to assess their coherence, distinctiveness, and representation in the dataset. Representative quotations were identified to illustrate each theme and subtheme.

6. The full research team reviewed and refined the candidate themes, combined conceptually overlapping themes, and clarified theme and subtheme definitions. Final themes, subthemes, and representative quotations were agreed upon through group discussion and consensus.

To maximize trustworthiness of this qualitative study [28,29], two or more investigators independently coded each focus group's qualitative responses, followed by consensus meetings to resolve disagreements for every coded segment. An initial codebook was generated from the original set of codes and applied in iterative rounds, with investigators independently reviewing coded data and reconvening to address discrepancies. Disagreements were encouraged. If they arose, coded responses were re-examined until agreement was reached. From the final, consensus-based coding, emergent themes were identified; relationships among themes were considered; and the team reached agreement on the names and operational definitions of each theme. During data collection and analysis, saturation was assessed through ongoing review of emerging codes and themes. As additional focus groups were completed, few new codes or concepts emerged, and existing themes became increasingly well developed. The research team completed all scheduled focus groups to ensure representation of participants from the planned geographic regions and practice settings. The dataset was then reviewed to select representative quotations as supporting evidence for each theme, maintaining fidelity to the subject responses.

To identify and limit potential investigator bias, our study incorporated multiple safeguards. Transcribed interviews underwent independent peer review, and member checks were performed on each focus group transcript by at least one clinical faculty participant from that group. The research team (2 males; 3 females) comprised experienced educational researchers, clinical educators, and Directors of Clinical Education (DCEs), some with advanced training in qualitative methodology. The research team engaged in regular reflexive dialogue regarding codes and themes throughout the analysis [30]. Coding proceeded in iterative rounds, and the analytic approach and interpretations were further reviewed by a consultant qualitative researcher. These strategies collectively strengthened the rigor, credibility and trustworthiness of the findings.

Due to the confidential nature of the focus group discussions, the full qualitative dataset is not publicly available. Table S3 provides the final themes, subthemes, codes, and representative participant quotations that support the study findings. Additional de-identified data may be available from the corresponding author upon reasonable request and subject to Institutional Review Board requirements.

2.3. Use of Generative Artificial Intelligence (GenAI)

Generative artificial intelligence (GenAI) tools were used to assist with the visual refinement of Figures 1 and 2 and to support editorial refinement of grammar, spelling, formatting, and language. GenAI tools were not used in study design, participant recruitment, data collection, data analysis, coding, theme development, interpretation of findings, or generation of study results. The authors reviewed and approved all GenAI-assisted content and take full responsibility for the content of the manuscript.

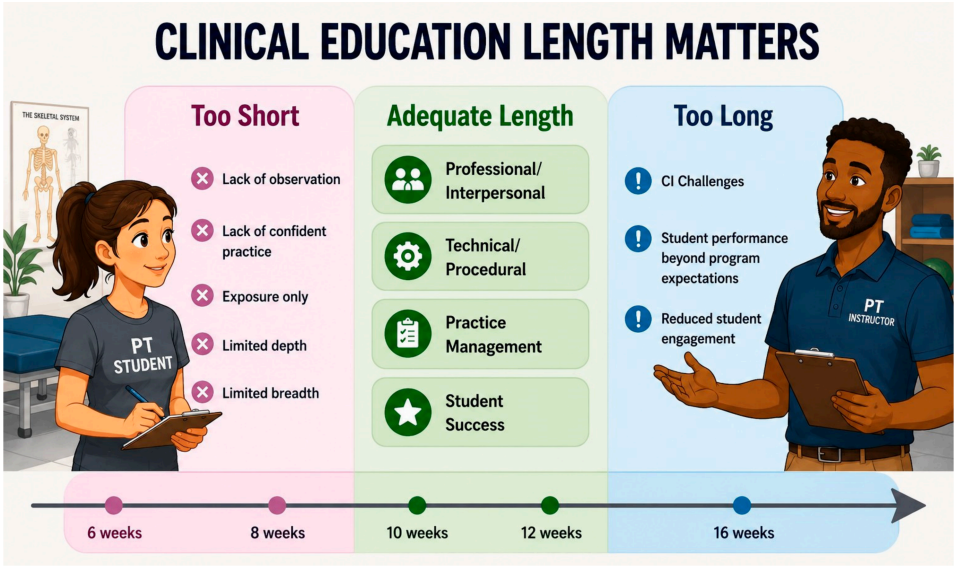


Figure 2. Clinical faculty perceptions of full-time clinical education experience (CEE) duration. Categories and duration ranges reflect participants' descriptions of CEEs perceived as too short, adequate, or too long. The boundaries are approximate, varied across participants and clinical contexts, and should not be interpreted as validated thresholds or universally optimal CEE durations. Abbreviations: clinical instructor (CI).

3. Results

Of the 108 clinical faculty from across the United States who originally expressed interest, thirty-one (28.7%) responded to follow-up correspondence and agreed to participate in one of the eight focus group interviews. Only pre-focus-group survey responses from the 31 eligible clinical faculty who participated in a focus group were reported (Table 1; Table S4). In the pre-focus-group survey, participants ranged from 28 to 57 years and served as clinical faculty from 1 to 35 years. As clinical faculty, 18 (58.1%) were CIs, three (9.7%) were SCCEs, and 10 (32.3%) served in both roles. Clinical faculty were predominantly female (n = 20, 64.5%) and worked in an outpatient clinical setting (n = 23, 74.2%). Participating clinical faculty had experienced diverse lengths of full-time CEEs, with the shortest full-time CEE ranging from 1 to 13 weeks and the longest full-time CEE ranging from 9 to 26 weeks. Clinical faculty identified appropriate lengths of full-time CEEs ranging from 8 to 15 weeks.

Three major themes emerged regarding clinical faculty experiences and perspectives on the duration of full-time CEEs:

1. Adequate time supports student development;
2. Consequences of excessively long CEEs;
3. Consequences of insufficiently short CEEs.

The resultant themes, subthemes, and number of weeks noted by participants are represented in Figure 2. Collectively, participants perceived the duration of CEEs as an important determinant associated with the depth, breadth, and quality of student learning experiences, with both insufficiently short and excessively long experiences viewed as presenting unique challenges for students and clinical faculty. The duration ranges shown in Figure 2 were derived from participants' references to specific CEE lengths during the focus group discussions. These duration ranges summarize participants' perceptions and were not established through direct assessment of student outcomes or statistical identification of cutoff points.

Table 1. Pre-focus-group summary table.

Variables	Mean (Range)
Age (years)	38.9 (28–57)
Years as CI/SCCE	10.9 (1–35)
Number of Students as Primary CI	15.0 (1–60)
Shortest Length Full-Time CEE (weeks)	6.5 (1–13)
Longest Length Full-Time CEE (weeks)	14.4 (9–26)
Perceived Optimal Length of Full-Time CEE	11.2 (8–15)
	***n* (%)**
Females	20 (64.5)
Region	
West North Central	6 (19.4)
South Central	4 (12.9)
South Atlantic	3 (9.7)
Pacific	3 (9.7)
New England	4 (12.9)
Mountain	4 (12.9)
Middle Atlantic	1 (3.2)
East North Central	6 (19.4)
Role	
CI	18 (58.1)
SCCE	3 (9.7)
Both CI and SCCE	10 (32.3)
Primary Practice Setting	
Outpatient facility	23 (74.2)
Inpatient rehab facility	5 (16.1)
Acute care hospital	3 (9.7)
Completed APTA Credentialing	23 (74.2)

n = 31; West North Central (IA, KS, MN, MO, NE, ND, SD); South Central (OK, TX, TN, AR, KY, MS, LA); South Atlantic (DE, DC, FL, GA, MD, NC, PR, SC, VA, WV); Pacific (AK, CA, HI, OR, WA); New England (CT, ME, MA, NH, RI, VT); Mountain (AZ, CO, ID, MT, NV, NM, UT, WY); Middle Atlantic (NJ, NY, PA); East North Central (IL, IN, MI, OH, WI); CI = clinical instructor; SCCE = Site Coordinator of Clinical Education; CEE = clinical education experience; APTA = American Physical Therapy Association.

3.1. Adequate Time Supports Student Development

In the first theme, participants viewed adequate time during full-time CEEs as important for providing students with opportunities for development in four subtheme areas: (1) professional development, (2) technical/procedural development, (3) practice management, and (4) student success. These subthemes along with sample codes and participants' quotes are provided in Table 2.

Table 2. Adequate time supports student development.

Subthemes	Sample Codes	Sample Quotes
Professional Development	Student Communication	"It's learning that building rapport communicating with patients to get the buy in and help with your successful results. So, I think, being able to work on that and see that progress was very good with the longer clinical experiences because then you're not just worried about how do I measure shoulder external rotation, or what exercises do I do?" (Participant G)

Table 2. *Cont.*

Subthemes	Sample Codes	Sample Quotes
Professional Development	Student Professionalism	"... I've had a few student issues arise. Weirdly enough, at week like 4 and week 6 and that was with like professionalism and communication primarily. I definitely needed that time. I think those were both like 10 to12 week rotations, and if I'd only had 7 or 8 weeks, I would have really identified a problem, and we wouldn't have had time to work on it." (Participant DD) "And interestingly, as of recent, we've noticed more like professionalism issues in our more recent students. And so with 4 weeks, it's not even long enough to get them up to par on like, hey, you need to show up on time. You need to talk to your patients. You need to get your feet in the door. So, it's just been far too short with those even introductory rotations." (Participant P)
	Student Self-Assessment	"But in that 12 weeks one thing that I've noticed between the 6 and the 12 week students is that it also gives them a chance to do an evaluation, and then follow that patient through their care, so they can actively see the change that they make, and it kind of helps them buy into the fact that hey, what I'm doing is right, or hey, what I'm doing is not right, right. Or what are some things that you taught me that I'm implementing with this patient that's actually effective, that I didn't think about." (Participant V)
Technical/Procedural Development	Clinical Reasoning	"12 weeks work really well. I love that. It makes such a difference those last 4 weeks, comparing, like the 8 to 12, of giving these students the independence and the confidence that they need going out into the real world and trying to problem solve through tough situations." (Participant R)
	Case Management/Patient Caseload	"12 weeks is enough to establish good habits and problem-solve and reproduce those problem-solving habits. And it's long enough to see enough variety of patient diagnoses and different cultural aspects." (Participant W)
Practice Management	Documentation	"We have Epic documentation system and for our students, it takes them 3 weeks to just finally get a hold of it." (Participant Y)
	Financial Management and Fiscal Responsibility	"Just gain a better understanding overall of, you know anything from like insurance to you know, DME needs and discharge planning all that. Those extra 2 weeks really just make we found make a big difference." (Participant B)
Student Success	Alignment of Program Student Achievement Expectations	"I think based on what clinical it is and how much of their didactic curriculum they've completed to that point should be a pretty big factor (in determining length of clinical experiences)." (Participant T) "But it really just depends on like you were saying, what the expectations are. So, if it's just to get their feet wet, I found 2 weeks is great, but if you're trying to delve more past that it's tough to do anything less than like 8 weeks." (Participant B)

Table 2. *Cont.*

Subthemes	Sample Codes	Sample Quotes
Student Success	Onboarding or Orientation and Site-specific Training and Student	"I think, because they're just not familiar with the clinic at all. At that point you're spending a lot of your time getting them oriented to just the flow of the clinic. And this is how it's going to work as a student that you're spending a lot of time getting them oriented more to their role instead of actually getting them into actually (be) treating the patients." (Participant P) "And it just felt like 8 weeks was just not quite enough time, because, of course, the 1st couple of weeks they're really just getting oriented to the clinic. You know, they're starting to see patients. Maybe it's their 1st time, especially in outpatient so they don't get rocking and rolling until maybe that second week, and that only offers maybe 5 to 6 weeks for them to actually be treating a caseload." (Participant N)

CEE = clinical education experience; DME = durable medical equipment.

3.1.1. Professional Development

Participants perceived that adequate time during full-time CEEs provides students with opportunities to develop and practice communication skills with patients, colleagues, and the interdisciplinary team as expressed by Participant G:

> "It's learning that building rapport; communicating with patients to get the buy in and help with your successful results."

Participants stated that adequate CEE duration was important for providing students with opportunities to develop professional behaviors including but not limited to being punctual, adhering to professional dress codes, and preparing outside of clinic hours when needed. Additionally, clinical faculty participants perceived that insufficient time may limit opportunities for students to develop confidence and independence. The final area discussed by participants regarding needing time for professional development was specific to self-assessment. Participants described adequate CEE duration as providing opportunities for students to self-assess their performance, learn from the experience, and then implement changes for improvement.

3.1.2. Technical/Procedural Development

In the next subtheme, participants discussed the reasons for which time is needed during full-time CEEs for technical/procedural development in patient care including case management, clinical reasoning, and patient caseload considerations. Participants discussed the perceived importance of exposure to a sufficient depth and breadth of patient caseloads as well as opportunities to see a patient through a full plan of care in order to progress toward independence in clinical practice. Participants viewed adequate time as also necessary to provide sufficient opportunities for the CI to offer feedback and support the development of students' problem solving skills, as illustrated by Participant R:

> "12 weeks work really well... It makes such a difference those last 4 weeks, comparing 8 to 12, of giving these students the independence and the confidence that they need going out into the real world and trying to problem solve through tough situations."

3.1.3. Practice Management

Practice management is the third subtheme, in which participants described the perceived need for sufficient time to provide students with opportunities to develop skills with documentation, financial management and fiscal responsibility, and guiding and coordinating support staff.

3.1.4. Student Success

In the final subtheme, participants described other critical aspects of value that were perceived to support student success. These aspects include alignment of program student achievement expectations with the length of the CEE, and time for onboarding or orientation and site-specific training. Participant N expressed this need for time for orientation:

> "And it just felt like 8 weeks was just not quite enough time, because, of course, the first couple of weeks they're really just getting oriented to the clinic."

3.2. Consequences of Excessively Long CEEs

In the second theme, participants articulated various challenges that they associated with full-time CEEs perceived as too long for students and CIs. These results included (1) undesirable redundancy, (2) student performance beyond program expectations, and (3) reduced student engagement. This theme along with sample codes and participants' quotes are provided in Table 3.

Table 3. Consequences of excessively long CEEs.

Sample Codes	Sample Quotes
Undesirable Redundancy	"Yeah, I think my critiquing of a student maybe become a little blunted at that point. You've been with a student for so long. It feels a little like, you know the Groundhog Day over and over. So, we'll sometimes switch up the CI like halfway through just so the student kind of gains a new perspective on things, and they may be able to teach them other things that I wasn't so that's one thing we've done to help with that. But I think 16 weeks with one person is a very long time. You better really like each other, I guess." (Participant B)
Student Performance Beyond Program Expectations	"We had this a couple of times with people that were graduating in May, and we had them in their last rotation. So, they've already been to other rotations. 16 weeks ended up being a little redundant the last month where it's like you could, you should, have your own caseload at this point. You should be getting paid for this." (Participant H) "I had a 24-week intern one time. Same thing there was plenty to do, cause we're seeing an advanced caseload where I'm at but yeah, at 12 weeks they were probably entry level. So yeah, same thing, like another 12 weeks of paying to go to school, and not earning money was, it seemed tough on the student. It was great for me; they just saw all my patients. But you know we still worked on things. But yeah, there probably could have been better use of their time. They could have spent another 12 weeks in a different field." (Participant M)
Reduced Student Engagement	"By 10 or 12 [weeks] they kind of hit their stride. Either they're going to be really proficient for what they need to do or have the like skill set of being all right, these are your nitpick things that I would have to say might work better for you later on, but once it kind of hits that 12 weeks, I think students kind of get burnt out to a little bit of like. All right, I have had this full caseload, now I have to go another month with our full caseload, and it's like, that's a bummer." (Participant O) "What I've seen in my students who've had that type of schedule is heavy burnout by the time they get to their last rotation because they're on like 3 9-week rotations back-to-back-to-back. Some of them are moving across country for each of these rotations to experience different settings, which is awesome. They're studying for their boards because they're taking boards early because they need to start into the workforce earlier. And so, I just find they get to that last rotation, and they're either checked out or they're just running on fumes." (Participant Q)

CEE = clinical education experience; CI = clinical instructor.

When describing undesirable redundancy, participants noted concerns of CIs being unsure of what more they can give for feedback to the student and experiencing boredom with the repetitive nature of precepting longer CEEs.

> "Yeah, I think my critiquing of a student maybe become a little blunted at that point. You've been with a student for so long. It feels a little like, you know the Groundhog Day over and over" (Participant B)

Participants stated that, during CEEs perceived as excessively long, students may exceed the program expectations set for the experience. Participants expressed that this may result in students functioning similarly to staff therapists after they have met the educational expectations of the experience, despite remaining in an unpaid student role. Additionally, participants perceived that CEEs extending beyond their educational value may be associated with reduced student engagement and clinical performance.

3.3. Consequences of Insufficiently Short CEEs

The final theme that emerged reflected challenges that participants associated with full-time CEEs they perceived as too short to provide sufficient time with a student. Described challenges include (1) lack of CI observation, (2) lack of confident practice, (3) exposure only, (4) limited depth, and (5) limited breadth. This theme along with sample codes and participants quotes are provided in Table 4.

During shorter CEEs, clinical faculty report not having enough time to observe students, give feedback, and then see the implementation of feedback:

> "By the time that the student is starting to feel comfortable in the setting where they're able to show a little confidence, grow a little bit more confidence in their skill set that they've had a chance to practice, we are starting to wrap up and they are right out the door before they can really get a chance to kind of cement that." (Participant C)

More time for further observation by the CI would allow for opportunities to further support and assess student readiness and growth.

When a CEE was perceived as too short, participants reported there was limited time for confident practice in which students were just getting things figured out and then the experience was over. Participants perceived that shorter full-time CEEs may allow time for students to be exposed to some practice of clinical skills but not enough time to become comfortable in the clinical setting or engage in cycles of reflection and change. Thus, suggesting shorter experiences may be beneficial for primarily for exposure.

Another issue described by participants was that shorter CEEs may not provide sufficient depth of learning, particularly in the areas of clinical reasoning, communication, professionalism, and problem solving. Participants attributed this to limited repetition and insufficient exposure to patients with similar diagnoses or complex cases. Lastly, participants perceived that patient complexity and the variety of clinical presentations impact the quality of learning opportunities for students. This concern was particularly pronounced during perceived shorter full-time CEEs, as students may not encounter the necessary breadth and diversity of cases to fully develop their clinical skills.

Table 4. Consequences of insufficiently short CEEs.

Sample Codes	Sample Quotes
Lack of Observation	"With a shorter clinical, especially 4 weeks, I didn't get as much of that [observation] as I felt like I would like to really see how they're implementing like feedback I'm giving, or things like that." (Participant A)

Table 4. *Cont.*

Sample Codes	Sample Quotes
Lack of Confident Practice	"I'm still having a lot of students who are 8 weeks, and they even feel like by the time 8 weeks come they finally feel that they can manage everything, and they feel really good and then they're gone. I think that the 12 week you really get those extra 4 weeks where you can really improve and feel more confident, and really try to go a little bit more, feeling more like you really can run a specialty just because, like I say, the kind of complex patients we have. So, I think 12 weeks is right." (Participant Y) "By the time that the student is starting to feel comfortable in the setting where they're able to show a little confidence, grow a little bit more confidence in their skill set that they've had a chance to practice, we are starting to wrap up and they are right out the door before they can really get a chance to kind of cement that." (Participant C)
Exposure Only	"So, I understand there's a sense for letting the student get a sense of the taste of what they're going to be doing practice a couple of their skills before they move on to the next part of their didactic curriculum. But from the clinical side of things it is just you make so much effort on trying to get them comfortable, to perform, that by the time that you can really start to critique on their performance, and then also get them to do more like a reflection. How am I doing versus? Just let me rely on the instructor to tell me what I'm doing wrong, because there's so many things that I've got to focus on. We're wrapping up just as they're out the door. And realistically, even in those early situations. If we could get another week or 2 weeks, the student would just be that much better off and much more comfortable when they would come back for one of their terminal rotations later." (Participant C)
Limited Depth	"They only are experiencing it; they're not practicing it. And so yes, they don't have enough repetition of problem solving. You can problem solve with, you know, 10 different patients, 10 different ways. But if you don't have the repetition of problem solving in that way then it's not going to become an established habit that helps you in your in your career." (Participant W)
Limited Breadth	"I think for the experience on inpatient rehab unit, we were a little bit at the mercy of the type of patients we got you know. There we would go through streaks on the rehab unit, where maybe we'd go for a month with not having a true spinal cord patient, spinal cord injury, or maybe we wouldn't have an amputee or and so, like I hit the midterm point, and I'd be like, Oh, I really hope, our second half of our clinical. We can get some. Not that you hope for those injuries for those patients, but I really hope we can get a good stroke or a good spinal cord injured you know that type of thing, and so some of it is I couldn't control in the sense that these are the patients that we're getting right now. And this is the mix of patients. I wish we had some more involved ones." (Participant I)

CEE = clinical education experience.

4. Discussion

Workplace-based clinical learning serves as the primary mode in which health professions students integrate knowledge, develop professional judgment, and prepare for independent practice [1,2]. Yet uncertainty remains regarding how much time in workplace-based clinical learning environments is necessary to support these outcomes. Across eight focus groups, clinical faculty described the duration of full-time CEEs as an important contributor to student learning, professional development, confidence, and engagement. Participants identified educational challenges when CEEs were perceived as either too short or too long, suggesting a potential "Goldilocks Zone" in which clinical education may provide sufficient opportunities for development without introducing unnecessary redundancy.

While this study was conducted within physical therapist education, the findings may have implications for other health profession programs that rely on workplace-based learning [10,31]. Similar tensions between competency attainment and time-based requirements exist in medicine, nursing, occupational therapy, and speech–language pathology [2,20]. The concept of a "Goldilocks Zone" may provide a useful conceptual framework for

considering how clinical training experiences can be structured to support student development while reducing redundancy and inefficiencies. These findings extend previous research [13–16] by providing insight into how clinical faculty conceptualize the relationship between time and readiness for practice.

4.1. The Educational Value of Adequate Time

Clinical faculty consistently described adequate time as important for student development during full-time CEEs. Despite not being asked to identify a preferred duration during the focus group discussions, participants frequently perceived 10 to 12 weeks as providing sufficient opportunities for feedback, repeated practice, and progression toward independence. These qualitative descriptions should be considered alongside the wider range of 8 to 15 weeks reported in the pre-focus-group survey. Considered together, these findings support the concept of a context-dependent "Goldilocks Zone." Consistent with prior studies [13–16], participants described adequate lengths of CEEs as offering opportunities for meaningful professional growth, allowing for students to develop the skills, judgment, and confidence necessary for entry-level clinical practice. These findings align with educational theory suggesting that professional competence develops through distributed and deliberate practice that incorporates exposure, feedback, and reflection [32–34]. Adequate time in workplace-based clinical learning appears to support technical skill development and broader professional growth required for entry-level clinical practice [35].

4.2. Educational Consequences of Experiences That Are Too Long or Too Short

Clinical faculty consistently described challenges associated with both excessively short and excessively long CEEs, suggesting that the educational value of clinical experiences may not increase indefinitely with additional time. When CEEs were perceived as too short, participants described fewer opportunities for repeated practice, reflection, and progressive entrustment, which they viewed as limiting the educational value of the experience. Although some participants referenced experiences shorter than eight weeks when discussing these challenges, the findings do not establish a universal minimum duration. These findings align with previous work highlighting the importance of confidence and adaptability in preparing students for increasingly complex and changing clinical environments [36]. Participants further noted that shorter experiences could limit the depth and breadth of patient encounters and offer fewer opportunities for repeated practice and refinement of clinical reasoning skills.

In contrast, when CEEs extended beyond the point at which students had achieved the intended performance expectations, clinical faculty described the potential for disengagement, redundancy, and diminishing educational returns. Some participants associated these concerns with placements extending beyond approximately 12 weeks, although perceptions varied and did not support a universal upper threshold. This finding is consistent with self-determination theory, which suggests that sustained engagement is influenced by opportunities for growth, challenge, and continued development [37]. Self-determination theory suggests that when learning opportunities no longer align with students' developmental needs, motivation can decline and attention may shift from learning toward a "completion" mindset [18,19,38].

Taken together, our findings suggest that clinical faculty viewed time as supportive in students' developmental progression from exposure and competency toward confidence, independence, and clinical proficiency. However, participants also perceived that this progression may eventually plateau, such that additional time does not necessarily result in proportional learning gains [39]. Clinical faculty described the greatest educational value occurring when CEEs provided sufficient opportunities for development while continuing

to offer novel learning experiences and meaningful challenges. The duration at which this balance occurs likely varies according to the student, program, and clinical setting. Future research should next examine how clinical placement duration interacts with competency attainment, feedback opportunities, and student readiness. Such work may help inform more flexible models of clinical education that integrate both time-based and competency-based elements.

4.3. Limitations

This study has limitations for consideration. First, although qualitative methodology is well suited to exploring experiences and perspectives, the sample size may have limited the range of clinical faculty viewpoints represented. Most participants practiced in outpatient settings. Therefore, the findings may not fully reflect the perspectives of clinical faculty in inpatient rehabilitation, acute care, or other settings. Participation was also voluntary, and only 31 of the 108 clinical faculty who initially expressed interest ultimately participated. Self-selection bias is possible, as those who participated may have had stronger opinions about CEE duration or experiences that differed from those who did not participate. Second, the research team has extensive experience in clinical education and, despite implementing strategies to promote reflexivity and minimize bias, researcher influence cannot be eliminated. Third, while participants shared perspectives regarding the appropriate duration of individual full-time CEEs, we did not investigate how many CEEs should comprise the total number of clinical education weeks within a curriculum. Fourth, we did not recruit other health professions or invested individuals involved in clinical education decision-making, including students, academic faculty, or educational leaders. Future research should investigate these perspectives and examine the relationship between clinical education duration and student development, competence, confidence, and readiness for practice across diverse educational contexts. Fifth, although participants referenced specific durations when describing their experiences, our study was not designed to identify or validate a threshold for an optimal CEE length. Lastly, this study examined clinical faculty perceptions and did not directly assess student learning, competence, confidence, or readiness for practice. Findings should not be interpreted as evidence that CEE duration causes differences in student outcomes.

5. Conclusions

Clinical education is a foundational component of workplace-based learning across the health professions, yet questions remain regarding how much time students require to develop confidence, competence, and readiness for entry-level practice. In this study, clinical faculty consistently described adequate time as important for professional growth, clinical reasoning development, feedback integration, and progressive independence. Clinical faculty also identified perceived challenges associated with CEEs that were too short or too long, including limited developmental opportunities, student disengagement, and educational redundancy. Collectively, these findings suggest a potential conceptual "Goldilocks Zone" for clinical education in which sufficient time is available to support student development. This concept "Goldilocks Zone" reflects the perspectives of the clinical faculty included in this study and should not be interpreted as a validated range of optimal CEE durations. Further research involving students, academic faculty, other clinical settings, and objective measures of student outcomes are needed to determine the potential relevance to other health professions.

Supplementary Materials: The following supporting information can be downloaded at https://www.mdpi.com/article/10.3390/ime5040100/s1, Table S1: COREQ checklist; Table S2: Interview

guide; Table S3: Focus group discussion code description and quote tables; Table S4: Participant pre-focus-group information.

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Abbreviations

The following abbreviations are used in this manuscript:

CEE	Clinical education experience
PT	Physical therapist
SCCE	Site Coordinators of Clinical Education
CI	Clinical Instructor

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