Academic and Clinical Dissonance in Physical Therapist Education: How Do Students Cope?

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**INTRODUCTION**

A primary goal of physical therapist education is to graduate practitioners who will advance practice and the profession. Educational programs strive to provide students with cutting-edge information and to instill ideal attitudes, values, beliefs, and skills for providing high-quality care. However, what students are taught is the “right way” in their didactic preparation may not be what they encounter in clinical settings. For example, students may rarely see their clinical instructors search for and apply evidence or thoroughly document patient care. Conversely, students may wonder why a progressive intervention approach learned from a clinical instructor is not being taught in the classroom. In both of these situations, students are left to struggle with making sense of why they are taught one thing in school and something else in the clinic. The messages that students receive from this implicit or hidden curriculum in clinical education are particularly important because physical therapist students spend a large amount of time exposed to the professional practice culture. If students experience different types of knowledge, values, and behaviors in clinical versus academic settings, then conflicting messages about what it really means to be a “good physical therapist” can result in cognitive dissonance or feelings of discomfort from holding conflicting beliefs.

How students cope with and process dissonance can have important effects on educational activities. A greater understanding of how physical therapist students experience and cope with cognitive dissonance caused by competing curricular factors has the potential to provide the basis for targeted educational approaches, enhanced learning environments, reduced student emotional stress and, in some cases, improved health care. The purpose of this research study was to explore how physical therapist students experience and cope with dissonance in academic versus clinical settings.

**METHODS.**

Qualitative data were gathered from 13 educational programs were invited to participate in the study, and 122 responses were received, for a response rate of 23.1%. Subjects. A total of 528 third-year physical therapist education students from 13 educational programs were invited to participate in the study, and 122 responses were received, for a response rate of 23.1%. Subjects. A total of 528 third-year physical therapist education students from 13 educational programs were invited to participate in the study, and 122 responses were received, for a response rate of 23.1%.

**RESULTS.**

Two primary categories of academic-clinical dissonance emerged from the student narratives. A small percentage of students described academic-clinical dissonance experiences related to professionalism and, in particular, to the core value of integrity. The remainder of the experiences were associated with patient/client management in the context of the current health care environment. Dissonance in the category of patient/client management included 3 subcategories: physical therapy examination, intervention, and documentation. Emotions evoked from the dissonance experience were primarily negative and, in nearly all cases, students took no or little action in response to curricular dissonance and deferred to the clinician’s or clinic’s standard of practice.

**DISCUSSION AND CONCLUSION.**

These results suggest that there are opportunities for academic faculty to better educate students for the realities of clinical practice, particularly in the areas of examination and documentation. Also needed are improvements in students’ preparation to take substantive action when indicated and the creation of academic and clinical cultures that support appropriate challenges to existing structures and practices. A greater understanding of how physical therapist students experience and cope with cognitive dissonance caused by competing curricular factors has the potential to provide the basis for targeted educational approaches, reduced student emotional stress and, in some cases, improved health care.

**Key Words:** Curricular dissonance, Physical therapist education, Ethical issues, Professional standards, Narrative inquiry.
REVIEW OF LITERATURE

Seminal work on cognitive dissonance was published by psychologist Leon Festinger in the 1950s. His theory proposed that when a person experiences ideas or beliefs that are not psychologically consistent with one another, then he or she will try to reduce the inconsistency to maintain a state of consonance. Festinger explained dissonance in terms of a person's expectations. Throughout a person's life, he or she accumulates information and has expectations about “what things go together and what things do not.” When such an expectation is not met, dissonance results. This dissonance causes psychological discomfort, motivating the person to reduce the dissonance. The motivation to resolve dissonance impels a person to reassess beliefs and change opinions or behaviors.

In a qualitative study of medical students, Thompson et al indicated that the processing and reduction of dissonance occur in 2 forms: reconciliation and preservation. Reconciliation involves students altering their own internal ideals to align with external ideals. In preservation, students discounted or diminished external ideals so that they could maintain their internal ideals. In most cases, dissonance was found to be coupled with negative emotions; that is, students were uncomfortable when experiencing the inner conflict and tension of dissonance.

A common form of cognitive dissonance experienced by health care students and new graduates is the dissonance between what they have learned in their educational programs and what they have experienced in clinical practice. This dissonance leads students to question what to believe: the academic ideal or the clinical reality. In a longitudinal study of newly qualified nurses, Maben et al found that professional and organizational constraints in the workplace were serious threats to the implementation and sustainability of nursing ideals and values in practice. Professional constraints included covert rules and a lack of positive attitudes and role models; organizational constraints included time pressures, staff shortages, and poor skill mix, resulting in intensification of nursing work, and role constraints. Within 2 years of practice, only 4 of the 26 nurses in that study were categorized as “sustained” idealists; the remaining nurses were categorized as “compromised” or “crushed” idealists. There was a plea from nurses in that study for more realism in academic programs, so that nurses entering the profession are not set up for a fall.

Beyond negative emotions, additional research suggests that curricular dissonance can lead to indifference or a negative view of a particular value; undermine an explicit curriculum content area, such as human sciences or evidence-based practice; or create the expectation that students will be the kind of practitioners that their teachers are not. Houghton et al found that nursing students experienced inconsistencies in the ways in which some skills were taught in the academic setting versus the clinical setting as well as differences between clinical settings. Students tended to replicate the practice as it was taught in the clinical setting regardless of whether it was evidence based or not. Other literature has similarly noted that even when students are taught evidence-based practice in the classroom, they often default to the norms of the “real-world” clinical setting to fit in, thereby continuing poor and traditional practices. Studies of physical therapist students during clinical education have reported that students tend to adopt the values and behaviors of the professionals with whom they work.

Students may respond to dissonance with various degrees of action. In the study of Rees et al, just over half of the students reported acting in the face of their dilemmas. Of their actions, only 13.2% were described as “obvious and direct.” Most of the students engaged in more subtle or indirect behaviors, such as debriefing with a trusted advisor, reporting the perpetrator afterward, or expressing sympathy for the wronged person. In another study examining 100 medical students’ descriptions of ethical dilemmas, only 4 students took action in the face of potential negative consequences. In an examination of student reasoning about action or inaction in professionally challenging situations, Ginsburg et al found that students referred to stated professional principles, such as honesty and self-regulation, as well as unstated principles, such as obedience and deference to authority. Other literature suggested that organizational climate and workplace norms may also contribute to students’ decisions to engage in compliance or refusal behaviors related to ethical dilemmas.

Lowe and Gabard studied physical therapist students’ ability to identify, address, and report ethical and legal violations encountered in clinical settings. They found that students frequently observed ethical or legal violations and that, overwhelmingly, students did not report the violations. Reasons for not reporting the violations included low position in a hierarchy, not recognizing a violation as an issue, fear of not being a team player, and personal consequences (i.e., failing a clinical course). In a retrospective analysis of physical therapist student narratives, Greenfield et al also found that students were unwilling to confront clinical instructors whom they perceived as engaging in unprofessional behavior for fear of negative consequences or retribution. Similar reasons have been
reported in studies of medical and occupational therapist students.\textsuperscript{38-42,45} Mansbach et al\textsuperscript{46} examined the self-reported willingness of physical therapist students to report misconduct. The results indicated that the students were more willing to report internally than externally and had a greater willingness to report the misconduct of a manager than of a colleague. It was also reported that medical students’ participation in unprofessional behaviors increased during clerkships and that participation in these behaviors was associated with an increased likelihood of perceiving the behaviors as acceptable, perhaps to resolve the cognitive dissonance.\textsuperscript{47} Finally, other strategies that students may use in response to conflicts in values include maintaining their values, compromising their values, and transforming their values to those of the real world.\textsuperscript{48}

There are a limited number of studies examining how physical therapist students experience and respond to dissonance between didactic learning and clinical practice. Tryssenaar and Perkins\textsuperscript{49} studied the transition from student to therapist in physical and occupational therapist students. They found that the students’ transition experiences included politics, shock, and gaps in education, and they speculated that faculty members—in their eagerness to teach best practice—may have shielded students from unpleasantness in day-to-day practice or may have poorly linked principles, theory, and practice.\textsuperscript{49} In a qualitative study of physical therapist students in clinical placements, students noted that working with real patients was not as straightforward as academic learning and that some clinicians did not have the time or interest in learning new knowledge from them.\textsuperscript{50}

In an experimental study on dealing with consistent and inconsistent health information, physical therapist students acquired medical information more readily if it was congruent with their health concept or philosophy.\textsuperscript{51} The students modified contradictory text to adapt it to their point of view, were less bothered by inconsistent information when it was given in the context of a concept congruent with their own philosophy, and disregarded or devalued information when they disliked how the information was presented (eg, a contradictory health concept).\textsuperscript{51} In a recent study investigating the informal and hidden curriculum in physical therapist education, student participants spoke of areas of dissonance between what they learned in the classroom and what they experienced in clinical practice.\textsuperscript{4} These differences were associated with the level of specificity and thoroughness needed in a physical therapist examination; the application of evidence-based practice; documentation; productivity; and reimbursement. As one example of this dissonance, students reported difficulty balancing clinical demands for productivity and the provision of quality care, as taught in their academic programs.

Cognitive dissonance can be a positive experience because it forces students to think critically, but educators need to prepare students to deal with the conflict.\textsuperscript{12} Meyer and Xu\textsuperscript{12,57} recommended preparing students to “anticipate their vulnerability to academic/clinical dissonance, appreciate its potential to impede their development, and recognize factors that facilitate optimal adaptation to dissonance.” Without such preparation, maladaptive responses by students such as retaining ideals and becoming disillusioned, or devaluing academic ideals as clinically irrelevant, are predictable and significant.\textsuperscript{15}

To best address potential academic-clinical dissonance experienced by physical therapist students, more needs to be known about what situations result in dissonance and how students react to the dissonance. The purpose of this research study was to gain further insight into how physical therapist students experience and cope with dissonance in academic versus clinical settings. Specifically, the research question was, “How do physical therapist students experience and cope with dissonance between the didactic curriculum and clinical practice?”

**SUBJECTS**

For this study, a purposive sampling of physical therapist students in their final year of the program was used. This criterion was selected because students near the end of their educational program have had the most time to participate in and experience both the didactic and the clinical education curricula. Participating physical therapist education programs were recruited from 17 accredited programs in 5 midwestern states, allowing for a mix of public and private universities as well as institutional size and classification. Initial contact was made with the program director or the director of clinical education to describe the study and the responsibilities of the person serving as the contact for this research project at participating programs. Thirteen programs agreed to participate and were asked to share information about the study with their third-year physical therapist students. Enrollments of the sampled classes ranged from 26 to 61 students. A total of 528 students received the email invitation and survey link to participate in the study, and 122 responses were received, for a 23.1% response rate. Respondents were predominantly women, white, and between the ages of 20 and 34 years. Most of their clinical experiences were completed in the west north central (Iowa, Kansas, Minnesota, Missouri, Nebraska, and South Dakota) and east north central (Illinois, Indiana, Michigan, Ohio, and Wisconsin) regions. Further demographic characteristics of the student sample are summarized in Table 1.

**METHODS**

**Research Design**

For this study, qualitative research methods were used. Qualitative research provides tools to study areas difficult to measure quantitatively, such as complex educational environments, how learners experience their educational programs, and various realms of professional education (such as professionalism).\textsuperscript{52} Narrative research methods focus on how individuals ascribe meaning to their experiences, involve the deliberate attempt to find new meaning from the stories, and can provide insights into the qualitative aspects of clinical practice.\textsuperscript{53-56} Moen\textsuperscript{54} argued that narratives capture not only the events that are significant to a person but also the context because of the connection to the person’s social, cultural, and institutional settings. For this study, personal incident narratives were used to examine dissonance experienced by students between the didactic curriculum and clinical practice. Personal incident narratives are described by Monrouxe et al\textsuperscript{50} as building on the structural perspective and features described by Labov and Waletzky\textsuperscript{57} to include the gist of the story (abstract); who, where, and when an event occurred (orientation); what happened during the event and what the respondent did (complicating action); and why he or she did this (evaluation). Furthermore, narratives can probe for what those involved do or do not think and feel to help provide an understanding of the impact of events on the narrator.\textsuperscript{50,57-59} This potential for qualitative research to access emotional responses (ie, what it is like) is essential for the in-depth understanding of experience.\textsuperscript{59,60}

**Data Collection Procedures**

The identified faculty contact from each participating program forwarded to students an email that was provided by the researchers, that described the study, and that included a link to a 15- to 20-minute open-ended response electronic survey. In addition, the faculty contact provided the number of third-year students enrolled in the program and the number of full-time clinical experiences completed by the cohort of students. For students who opted to participate in the study and accessed the link to the survey, the study
was described in an introductory section. The introductory text informed the students that choosing to complete the online survey served as their consent to participate.

The survey included 2 sections. The first section was demographic and asked students to describe their age, sex, race/ethnicity, program affiliation, and clinical education experience (weeks of full-time clinical education, number of full-time clinical experiences, practice setting of clinical experiences, and geographic location of clinical experiences). The second section incorporated a brief explanation and an example of dissonance between classroom learning and clinical practice. It contained questions modeled after previous research in medicine by Rees et al27 and included a series of questions about a memorable time when the students experienced dissonance between what they learned in the classroom and what they experienced in clinical practice. The survey questions were pilot tested with 3 third-year DPT students before the study, and the students posed no questions regarding understanding of the consent information or survey questions. The guiding questions were as follows:

1. From your perspective, please describe the situation/incident: what happened, who was there, where did it occur, etc.
2. What actions were taken by you or others in response to the situation?
3. Why that/those actions?
4. What were you thinking and/or feeling about the situation?
5. If this situation arose again, what would you do?
6. Other comments on the situation?

Students were sent a reminder email provided by the researchers after 2 and 4 weeks to encourage participation. Additionally, students who elected to complete the survey were given the option of entering their names in a random drawing for a $50.00 Target gift card. That information was submitted through a separate "survey" and, as such, was not linked to the data that the students provided as part of the research project.

**Data Analysis**

All students described 1 dissonance scenario in response to the survey questions. The 2 researchers independently read and coded the open-ended responses using a constant comparative method, an inductive approach with no predefined coding criteria or hypothesis, to generate initial categories from the raw narrative data.57,61–63 The researchers met to compare and discuss the individual coding and refine the analysis and categories. On the basis of this discussion, the researchers independently returned to the data and developed coding categories representing types of dissonance; types of action taken, if any; rationale for action/inaction; types of feelings experienced because of the dissonance; and relationship of the dissonance to professional core values. When the researchers met to discuss this round of coding, there were minor variations in the labeling of categories but not in the meaning of the narratives.64 The parts of the narratives in which there were discrepancies were reread and discussed, and labeling of the categories and subcategories was then collaboratively decided. Thus, constant comparisons were made between the narrative data and the researchers’ separate interpretations of the narratives. From this process, final categories and subcategories emerged. Table 2 summarizes the identified categories.

Triangulation, the process of using multiple methods of data collection, multiple sources of data, or multiple investigators, was used to increase the credibility and dependability of this qualitative research study.52,65 Conducting the narrative survey with multiple students from 13 different physical therapist schools located in 5 different states provided sources of triangulation for the narrative data. In addition, all narrative data were read and independently coded by the 2 researchers. Comparison of the coding results revealed a high degree of consistency between the researchers. Because of the anonymous nature of the survey responses, participant review and validation of the analysis were not possible.

**RESULTS**

In the present study, we explored how physical therapist students experience and cope

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### Table 1. Characteristics of Student Sample (N=122)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>81.1</td>
</tr>
<tr>
<td>Men</td>
<td>18.9</td>
</tr>
<tr>
<td>Age (y)</td>
<td></td>
</tr>
<tr>
<td>20–24</td>
<td>45.9</td>
</tr>
<tr>
<td>25–34</td>
<td>53.3</td>
</tr>
<tr>
<td>35–44</td>
<td>0.8</td>
</tr>
<tr>
<td>Race or ethnic originb</td>
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</tr>
<tr>
<td>White (not of Hispanic origin)</td>
<td>92.6</td>
</tr>
<tr>
<td>Asian</td>
<td>2.5</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>1.6</td>
</tr>
<tr>
<td>African American or black</td>
<td>0.8</td>
</tr>
<tr>
<td>American Indian or Alaskan Native</td>
<td>0.8</td>
</tr>
<tr>
<td>No response</td>
<td>3.3</td>
</tr>
<tr>
<td>Institution</td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>61.5</td>
</tr>
<tr>
<td>Public</td>
<td>38.5</td>
</tr>
<tr>
<td>Full-time clinical experience (wk)</td>
<td></td>
</tr>
<tr>
<td>Average no.</td>
<td>25.6</td>
</tr>
<tr>
<td>Range</td>
<td>4–42</td>
</tr>
<tr>
<td>Type of facility in which</td>
<td></td>
</tr>
<tr>
<td>full-time clinical experience was</td>
<td></td>
</tr>
<tr>
<td>completed</td>
<td></td>
</tr>
<tr>
<td>Acute care</td>
<td>23</td>
</tr>
<tr>
<td>Subacute care rehabilitation hospital</td>
<td>9</td>
</tr>
<tr>
<td>Outpatient</td>
<td>56</td>
</tr>
<tr>
<td>SNF/ECF/ICF</td>
<td>10</td>
</tr>
<tr>
<td>School system</td>
<td>2</td>
</tr>
<tr>
<td>Home care</td>
<td>1</td>
</tr>
</tbody>
</table>

aValues are reported as percentages unless otherwise indicated. PT, physical therapist; SNF, skilled nursing facility; ECF, extended care facility; ICF, intermediate care facility.
bSome students selected more than 1 category.
with dissonance between the didactic curriculum and clinical practice. Two primary categories of academic-clinical dissonance emerged from the student narratives and were present across demographic groupings related to sex, age, and institutional type. First, a small percentage of students described academic-clinical dissonance experiences related to professionalism and, in particular, to the core value of integrity. The remainder of the experiences were associated with patient/client management in the context of the current health care environment, in which time constraints are the norm and efficiency and productivity are highly valued. Dissonance in the category of patient/client management included 3 subcategories—physical therapist examination, intervention, and documentation—all of which were influenced by the clinic environment. In the following section, experiences of academic-clinical dissonance connected with professionalism and patient/client management are described, along with the emotions they evoked and the actions they engendered.

**Professionalism**

In physical therapy, professionalism is described in terms of 7 core values. Although there is some overlap among sample indicators associated with each core value, the core value of integrity best represents the experiences described by students in this category. Integrity is defined as a "steadfast adherence to high ethical principles or professional standards" and includes a call for practice that is consistent with all applicable "rules, regulations, and laws." A narrative identifying academic-clinical dissonance in relation to ethical principles and standards of care was provided by respondent 119 (R119):

> In an acute care setting, a mid-40's year old man was admitted for an acute stroke. He was not a citizen of the United States and was doing whatever computer-oriented jobs he could without a green card to support himself; therefore, he did not have insurance… After performing the evaluation and a treatment session the following day, I [the student] had assessed he was making great progress and showed great potential for nearly full recovery. However, my CI [clinical instructor] directed me away from doing further follow-up treatments without an explanation why.

Other narratives described ethical issues such as providing unnecessary care or placing all patients at a skilled nursing facility in the highest resource utilization group category regardless of diagnosis or ability to participate. Some narratives addressed regulatory and legal considerations associated with direction, supervision, and confidentiality. For example, students described situations in which physical therapist assistants and aides were initiating and changing exercise programs, clinical instructors were not providing direct or on-site supervision during Medicare B/Medicaid patient visits, or confidential information about patients was shared in front of other patients or staff. As one student (R37) stated, "We're taught to follow HIPAA but many locations freely talk about patients within their department."

**Patient/Client Management**

Eighty-six percent of the student narratives portrayed academic-clinical dissonance related to professionalism, 1 student (R119) actively advocated with her clinical instructor and the case manager to address the situation on behalf of the patient. That student stated, "I decided I would do everything I could to advocate for him since he had no one to represent him." Among the remaining students, 2 mentioned the issue to their clinical instructor, but no other action was taken; 2 did not discuss the issue with their clinical instructor but shared their concerns with the director of clinical education after the clinical experience was completed; and 4 took no action. Generally, several students commented that they did not feel comfortable raising these issues. This sentiment was exemplified by 1 student (R102), who stated, "I had a difficult time speaking up about my issues because this was the way this clinic had always been run."

**Examination.** In the area of examination, student narratives described dissonance related to thoroughness and technique specificity. For example, across a variety of settings, the examinations in which students participated clinically were often less comprehensive or included shortcuts that were not taught in the didactic curriculum. The most frequent rationale for these differences was an environment in which there was limited time and a need for efficiency. As 1 student (R82) stated,
Exams aren't nearly as thorough in the real world as we are taught. I have experienced this at all my clinical rotations. There just isn't enough time. Highlighting the difference in emphasis between the classroom and the clinic, 1 student (R1) commented, "In school we are taught all of the detailed steps to go through during an evaluation and if there is something that 'we' as students miss, it is a problem. In the clinic, I have found that the evaluation process is very different, and everything is more of a screen than actual tests." Student narratives indicated that this scenario occurred across all practice settings. In addition to time, students described other constraints that affected their ability to conduct a comprehensive examination. For example, 1 student (R47) shared, "In the SNF [skilled nursing facility] there was a big push for productivity and the amount of charges that should be made every day, regardless of the patient population being seen. It was a tough balance between productivity and performing an appropriate in-depth initial evaluation like we learned in school."

In the area of technique specificity, student narratives described scenarios in which tests and measures were not performed in the standardized way in which they were taught in school. These narratives identified strength, range of motion, sensation, and balance testing as common examination components for which this dissonance was observed. Experi- diency was identified as a reason for these differences. For example, 1 student (R29) commented, "...objective tests and measures on the acute care floor. I wanted to use standardized tests during the patient's evaluation and my CI told me it took too much time.”

Patient-related considerations were also identified as important factors in necessitating deviations from the standard procedures learned in the classroom. As 1 student (R85) noted, "We were taught to completely follow the directions with balance assessments. In the acute and subacute settings with patients who have limited energy this is not always possible.” Similarly, a student (R105) completing a clinical experience in a home health care setting described the following:

Performing a PT [physical therapist] evaluation I was taught should always include some sort of muscle testing, and when testing these muscles it should be done in the appropriate position as outlined by our textbooks. However many of our patients were unable or unwilling to assume a prone or sidelying position....

Emotional Response and Action – Examination. When discussing academic-clinical dissonance associated with the subcategory of examination, slightly more than half of the respondents did not describe an emotional response in their narrative. For those who did, the emotional responses were overwhel- mingly depicted in negative terms and included feelings of frustration and inadequacy. For example, 1 student (R4) stated, "It was frustrat- ing and my CI made me feel like I wasn't doing it right and that I didn't know any- thing.” Another student (R117) commented, "I was embarrassed that I did not recognize what an initial eval looked like in an acute clinical setting.” The experience of academic-clinical dissonance was also described as overwhelming and resulting in feelings of stress. For some students, the frustration or irritation was directed at the academic in- stitution. For example, 1 student (R103) de- scribed her response as "mostly irritated that we had to spend so much time learning pre- cise positionings when it was mostly thrown out the window.” Others directed their con- cerns toward the clinical site. For example, 1 student (R105) stated, "I was feeling confused regarding the fact that something that was so important in the classroom was completely disregarded...in the clinic.”

The actions that students took in response to the dissonance generally fell into 2 catego- ries. Students either did nothing and deferred to the approach taken in the clinical setting or discussed the situation with their clinical instructor and then deferred to the approach taken in the clinical setting. For example, 1 student (R29) who took no action stated, "I chose to not push wanting to use the objec- tive tests with the patient. The CI was not in- terested in using them to improve her quality of care.” Another student (R82) taking this approach stated, "I learned to adapt to how my CIs performed their exams. I cut out some tests and measures to do so.” In the narra- tives, students often described their rationale for not taking action as being related to their student status, their limited experience, and their understanding that the clinic's approach was necessary to function in the real world. For example, 1 student (R36) noted, "I asked the therapist if they ever did testing of other muscle groups...I felt as though there was the possibility that important information could be missed...but I also acknowledged that I was only a student and the therapist was much more experienced than I was.” Another student (R97) commented, "I understand we need to be thorough but I also understand there is a business aspect to health care and balancing the two is really difficult when you're still fresh and green.” Only 1 student, who described being allotted an additional 15 minutes for evaluations, reported an overt ac- tion that was taken in direct response to her experience of dissonance.

Intervention. Regarding academic-clinical dissonance in the area of intervention, three subthemes were identified: evidence- based practice, patient safety, and approach to intervention. For the subtheme of evidence- based practice, there were examples identifying more use of evidence in the clinic than in the classroom as well as narratives describing more use of evidence in the classroom than in the clinic. For example, as 1 student (R64) in an outpatient setting noted:

...my clinical instructor is a very evidence based practitioner...Certain treatment techniques are taught in the classroom that are not as supported by evidence and therefore not used in the clinic. My CI has discussed with me how treatment techniques such as ultrasound and certain mobilizations are not ben- eficial in the way that I was taught in the classroom.

In contrast, another student (R16) com- mented, "In the outpatient ortho clinic, my CI would treat patients with techniques that were not following the latest research—e.g. using TENS [transcutaneous electrical nerve stimula- tion] and hot packs on chronic LBP [low back pain] or ignoring eccentric plantar flexion for Achilles tendinopathy.”

A second area of academic-clinical disso- nance related to intervention was connected to patient safety. For example, 1 student (R88) reported, "My CI and the other PTs at the site did not use gait belts with their patients. In- stead, they grabbed hold of patient clothing for transfers...In school, I was taught to al- ways use gait belts for patient safety and legal issues.” Safety issues were also described in relation to potential contraindications to exercise. As 1 student (R50) reported, in the classroom he was taught that there were minimum values for oxygen saturation below which exercise was contraindicated but, in fact, "In the hospital, many patients are be- low [the minimum oxygen saturation level] at rest for a variety of reasons...and to withhold therapy because of that was not acceptable.”

Students also described academic-clinical dissonance related to different approaches to intervention. For example, 1 student (R53) shared:

I observed my CI with a patient who had cervical pain that was evaluated as upper trapezius spasm with palpable trigger points. I began working with this CI after he had seen this patient two or three times. In that time he had only completed traction and ultrasound for treatment. In school we learned...palpa-
ble trigger points would indicate manual trigger point therapy rather than superficial modalities and traction.

Another student mentioned a clinic in which a specific brand of exercise equipment was used and all patients were prescribed a similar program regardless of their individual presentation. The student (R33) wrote, “Every patient who was referred to the clinic...went through the program even if it might not have been the best option for them or if they had not made any progress with the program.”

Finally, throughout the narratives describing dissonance associated with intervention, students reported that pressures in the clinical environment, such as those related to productivity and time, resulted in situations that limited their ability to provide a level of care congruent with what they had been taught in the classroom. For example, 1 student (R68) stated that in all of her clinical experiences, “...everyone is so rushed and 30 minutes is not enough for outpatient therapy...” and it felt like we were “not even providing good patient care because we were so worried about the time.” Another student (R42) noted:

I felt as if each patient was not getting appropriate attention per what was being billed for. Some patients were left on heat for additional time, new evals were being rushed and interrupted to attend to questions from other patients, and there were instructions flying across the room in order to keep the whole outfit running smoothly.

Student examples also included clinical situations in which new evaluations and discharge recommendations were prioritized and, thus, as 1 student (R83) commented, it was difficult to “provide quality patient care as we mainly only performed evals and did not perform hardly any follow up treatments.”

Emotional Response and Action – Patient/Client Management: Intervention. Unlike what was found for the examination narratives, most students who chose to share a narrative related to intervention did describe their emotional responses to the situation. The most frequent descriptors used to illustrate those responses were feelings of frustration, nervousness, and discomfort. For example, 1 student (R49) commented, “I was angry and frustrated. I knew it was not optimal care.” For some students, although their initial reaction might have been discomfort or frustration, they also reported that over time and through discussions with their clinical instructors, their feelings about the situation changed. For example, 1 student (R121) commented, “At first I was completely shocked, after spending a large amount of time talking with my CI I have accepted why they do what they do...I still have some discomfort...however I can understand where the clinicians are coming from making it more comfortable for me.”

Student responses to situations involving intervention were similar to those for examination and, with few exceptions, involved either taking no action or discussing the issue with their clinical instructor and then deferring to the practice of the clinic. Two primary rationales for these responses were shared and, as with examination, they involved deference to the experience of the clinical instructor as well as an acknowledgment that this was the real world. As 1 student (R49) noted, “I would not work at a facility where this was the policy” but “as a student, I would roll with the punches.” Another student (R76) commented, “I just feel that it’s part of being in the real world with a high census...” Students also reported feeling helpless to change their situations; as 1 student (R15) commented, “this is just how it is in many OP [outpatient] settings.”

Documentation. In the subcategory of documentation, as with examination, several students identified the thoroughness with which documentation was completed as an area in which they experienced dissonance. For example, 1 student (R54) noted that she was “taught a very formal, thorough form of documentation in school but in clinical practice, I have seen that most therapists put down the bare minimum or there is not the specific format...taught in class.” She attributed this difference to clinical time constraints and productivity demands. Other students also commented that lack of time affected their ability to complete documentation as they were taught and, at times, affected patient care. As 1 student (R49) noted, staff and students were “not given time to document, as it was expected that you would complete documentation while with patients...[as such] some interventions could not be done. Manual therapy, for example, was limited.” Another student (R84) commented, “In all of my clinical experiences there has been a disconnect between the amount of documentation that needs to be completed and the timeframe it needs to be completed in and the amount of documentation and time constraints that were utilized in school.”

Emotional Response and Action – Documentation. Although some of the emotional responses to academic-clinical dissonance related to documentation were similar to those for examination and intervention, such as feelings of frustration and stress, feelings of surprise were expressed only in regard to documentation. The narratives suggested that many students did not anticipate how difficult it would be to document according to the principles they learned in the classroom when they were in the clinical environment. One student (R74) commented, “I was surprised to see how the real world operates, compared to what we are taught in school.” Another student (R59) stated, “I was surprised by the amount of time spent with documentation following the completion of a day and during a 20-30 minute lunch break.” Part of the frustration for some students was a perception that they had not been prepared for this reality. As 1 student (R84) stated, “...there is a definite lack of ‘real life’ timeframes given with documentation in class in comparison to what is completed during a work day.”

In response to dissonance in the area of documentation, students were more likely to take action that involved specific accommodations or steps that would allow them to meet the clinic standard in this area. For example, 1 student described how she set specific goals to push herself to improve her documentation skill and speed. Another student (R39) explained, “I ended up taking my computer home with me and finishing my charting in a remote area...because that was the only way in which to get charting done within 24 hours and get home in time to get supper started for a shared family meal.” Another student (R92) noted that she was able to “write notes during the drive time between facilities during home health but this would not be accomplished by a single PT.” Only 1 student reported that she maintained the documentation standard that she had been taught in school despite pressure to do otherwise. The remaining students discussed the issue with their clinical instructor but deferred to clinic expectations and norms for documentation. Students generally reported that they took these actions because they felt limited by their student status and recognized that this was the real world.

DISCUSSION
The results of the present study suggest that experiences of academic-clinical dissonance, as described by physical therapist students, can be divided into 2 major categories: professionalism and patient/client management. The experiences represented by the professionalism category were most closely associated with the American Physical Therapy Association core value of integrity and included narratives that described ethical dilemmas or direction, supervision, or confidentiality practices that appeared inconsistent with legal or regulatory guidelines. The dissonance experiences that illustrated this category were consistent with the “challenging and whistleblowing” dilemmas
described by dental, nursing, pharmacy, and physical therapist students and 2 of the ethical themes identified in a qualitative study of physical therapist students’ clinical journal entries. Specifically, the 2 ethical themes that were identified by Geddes et al. and that were congruent with the dissonance experiences in the present study were professionalism (or practice congruent with professional standards and values) and client advocacy.

Within the patient/client management category, it was clear that constraints unique to the clinic environment, such as limited time and high productivity requirements, resulted in practice norms that were perceived by students to be in conflict with those taught in the academic setting. In general, the subcategories and environmental constraints identified in the present study were consistent with those found in previous work in physical therapy. For example, Dutton and Sellheim described the specificity and thoroughness of a physical therapist examination, the application of evidence-based practice, documentation, productivity, and reimbursement as areas in which student participants spoke of dissonance between what they learned in the classroom and what they experienced in clinical practice. Furthermore, safety breaches, inconsistency in the teaching of skills between academic and clinical settings, and the impact of organizational and professional constraints have been identified as important elements of academic-clinical dissonance by other researchers across a variety of health professions. The fact that these areas of dissonance have been replicated in other work and, in particular, for physical therapist students lends support to their identification as primary foci for efforts to provide students with skills to effectively address dissonance and, in some cases, better prepare them for real-world clinical situations.

For most of the students, academic-clinical dissonance evoked a negative reaction and involved feelings of frustration, discomfort, and stress. This generally negative emotional tone was similar to descriptions of reactions to dissonance in medicine and nursing. Although the feelings of stress and anxiety identified in the present study were similar to the emotional descriptors reported in other health professions, the students in the present study did not describe reactions that rose to the level of moral distress or cynicism. In addition, with the exception of 1 comment describing an experience as “scary,” there was limited evidence of fear or role uncertainty in the student narratives, as has been identified by other researchers. It is possible that the types of situations in which physical therapist students find themselves, as suggested by Monrouxe et al., are generally less serious, traumatic, or life-threatening than those faced by health professionals such as nurses or physicians. Finally, there was evidence that feelings of frustration were sometimes associated with a situation in which explicit curricular content was undermined, as students observed that some of their didactic learning “was mostly thrown out the window.” This phenomenon has also been identified for medical, occupational therapist, and physical therapist students in relation to the application of evidence-based practice skills.

There were both similarities and differences in emotional responses, depending on the context in which the curricular dissonance occurred. Although one might expect that experiences of dissonance related to situations that were potentially unethical or illegal would result in more substantial emotional responses, there were few differences in the descriptive terms applied to dissonance related to issues of integrity and those applied to other experiences of dissonance. The reasons for this finding are unclear. It is possible that students engage in a process of “preservation,” as described by Thompson et al., to reduce and minimize their dissonance experiences. Their narratives thus may reflect attenuated emotional responses. Another possible explanation is that the students adopted this approach because they viewed their situation as temporary and believed that they had little control or power to change their circumstances. This notion is reflected, to some extent, in students’ comments indicating that they responded passively or did not have the courage to speak up.

The subcategory of examination was different from the others in 2 primary ways. First, for this subcategory, several students did not describe emotional responses in their narratives. This finding may indicate that their experiences did not generate strong emotional reactions or that some physical therapist students are not particularly skilled at reflecting on and articulating their emotional responses. Second, narratives in this subcategory included multiple references to feelings of incompetence and inadequacy, which were not expressed in response to other types of dissonance. It is possible that the examination process and the critical thinking it engenders are so pivotal in directing patient/client management that students believe that performing them well is particularly important. This notion is not surprising given the importance of examination and evaluation in defining the role of the physical therapist.

Student narratives describing dissonance related to intervention indicated a shift in emotional responses over time that was not observed in the other narratives. Specifically, students described themselves gaining understanding and becoming more comfortable over time. This apparent reduction in dissonance was typically associated with students discussing the situation with their clinical instructor. Interestingly, students who experienced dissonance related to examination and documentation also discussed the situations with their clinical instructors, but an alternation in responses over time was not observed.

For the subcategory of documentation, several students shared feelings of surprise. This reaction was similar to the “reality shock” that has been described in studies of physical and occupational therapy students, nurses, and midwives upon entry into practice. Interestingly, surprise was not mentioned in response to any of the other categories or subcategories of curricular dissonance. This finding may suggest that students are particularly unprepared for the realities of documentation in the clinical environment; they may have no inkling of the pressure they will be under to document in an efficient and effective manner. In other areas, such as examination and intervention, it appears that students have some idea that adjustments to their approach may be needed in the clinic environment. These data highlight an area for which it may be particularly important for faculty to better prepare students so that they have a greater awareness of these constraints and are provided with opportunities to practice documentation in a manner that is more consistent with that seen in the clinic environment.

The actions taken by students in response to curricular dissonance were similar to those described by Rees et al. and included no action, subtle and indirect action, and obvious and overt action. Subtle and indirect action in the present study was similar to “action after the event” in the study of Rees et al. and included discussion with the clinical instructor and later reporting of the incident to the academic institution. In nearly all cases, whether students engaged in discussion with the clinical instructor or not, students deferred to the clinician’s or clinic’s standard of practice. This response occurred regardless of whether the issue was related to professionalism or patient/client management and, thus, is particularly concerning because it relates to potentially unethical, fraudulent, or illegal behavior. If under no other circumstances, it is in these cases that faculty might hope that students would be empowered to take action. The fact that students generally did not do so is indicative of the significant impact of factors such as their lack of confidence, low
hierarchical position, and fear of potential negative consequences.

The physical therapist students in the present study appeared to be less likely to take action than medical students, 13.2% of whom took “obvious and direct” action in the study by Rees et al. In contrast, the findings of the present study are similar to those of other researchers in physical therapy, who found that students rarely reported ethical or legal violations or confronted clinical instructors whom they perceived as engaging in unprofessional behavior. Students took the most action in response to experiences of curricular dissonance related to documentation. In these cases, the typical response was to make personal adjustments, such as bringing documentation home, to meet the expectations of the clinical setting. Thus, the students did not address the root cause of the dissonance but rather took an action that, although not the clinic norm, allowed them to meet expectations.

Student explanations for their action or inaction in response to curricular dissonance suggested that, in some cases, they felt uncomfortable confronting their clinical instructor or felt helpless to change their situation. Students described their rationale as being related to their student status, their limited experience, and their understanding that the clinic approach was necessary to function in the real world. Transformation of values to the real world and deference to authority have also been reported in medicine. Similarly, in a recent study in physical therapy, Lowe and Gabard noted that one reason students did not report ethical and legal violations was because they were in a low position of hierarchy. In that study, fear of a personal consequence, such as failing a clinical, and not being a team player were also identified as important factors, but these did not emerge in the data reported here.

In the explanations that students provided to justify their inaction, they demonstrated the dissonance strategy described by Thompson et al. as “reconciliation,” or altering their internal ideals to align with external ideals. The extents to which students accepted various behaviors as reflective of the real world and failed to see themselves as potential change agents further emphasize the students’ perception that they did not have the experience, confidence, or positional power to challenge the status quo. In addition, a recent review of the literature on speaking up by hospital-based health professionals identified perceived lack of knowledge, fear of reprisal, concern about creating conflict among the health care team, and perceived efficacy as factors that inhibited speaking up. These data suggest that pressures and perceptions similar to those identified in the present study may persist when students transition into the role of novice practitioner.

The 2 categories used to classify experiences of curricular dissonance are not necessarily mutually exclusive. On the one hand, most of the narratives related to professionalism and the core value of integrity involved clear ethical, legal, or regulatory issues. On the other hand, although perhaps less absolute, one could argue that, in some cases, the failure to perform a comprehensive or technically correct examination or provide interventions that are evidence based also has ethical implications. Thus, the dilemma for academic and clinical educators is to determine the “tipping point” beyond which student practice experiences are no longer congruent with minimally acceptable standards of care. Up to this point, it is imperative that academic faculty provide students with learning experiences that move beyond the “ideal” and realistically simulate clinical practice. On the basis of the findings of the present study, it would appear that addressing this tipping point is a potential weakness in some physical therapist curricula and that faculty may be, as suggested by Tryssenaar and Perkins, shielding students from unpleasant day-to-day practice.

Although a low level of curricular dissonance can facilitate learning, more realistic preparation in documentation, including completion at a certain level of detail and within typical clinical time frames, would reduce students’ feelings of stress, anxiety, and discomfort when they enter clinical practice. Similarly, in the academic setting, practice with examination prioritization when time is limited and with appropriate shortcuts related to examination techniques may be warranted. In contrast, there is a need for an important dialogue about the point at which student experiences in the clinic reflect a quality of patient care that is no longer acceptable. In such cases, students must be better prepared to take action, and didactic and clinical cultures must be altered to allow for the type of challenge and whistleblowing that is needed. Figures 1 and 2 show visual representations of the tipping point and examples illustrating how balance might be achieved.

Study participants were limited to students who attended physical therapist education programs in the upper Midwest and who completed most of their clinical education experiences in the north central region of the United States. Thus, they may not be representative of physical therapist students throughout the United States; this characteristic, in turn, may limit the generalizability of the findings of the present study. Comparable studies with participants from other regions of the country should be conducted to confirm or refute the applicability of the results to a broader representation of students.

The fact that the researchers did not provide any formal training in writing personal incident narratives was an additional limitation. Writing narratives that not only are descriptive but also incorporate the depth required for critical reflection requires time and opportunities for skill development. In the absence of training and practice, the respondent narratives in the present study may not have fully reflected the depth and breadth of the students’ emotional responses or actions.

The low survey response rate was also a limitation because it left unknown whether the nonrespondents had experiences with academic and clinical dissonance or whether any such experiences that they had differed in any significant way from those of the respondents.

Finally, research should explore whether novice practitioners also experience academic-clinical dissonance as they transition into the workplace and, if so, whether their responses to dissonance are similar to or different from those reported by students. Consideration of the effect of dissonance on the morale of new professionals as well as related recruitment and retention issues is also of interest.

In conclusion, the purpose of this research study was to explore how physical therapist students experience and cope with dissonance in academic versus clinical settings. Students’ experiences of dissonance could be divided into 2 categories: professionalism and patient/client management. The experiences represented by the professionalism category were most closely associated with the American Physical Therapy Association core value of integrity and included narratives about ethical dilemmas or direction, supervision, or confidentiality practices that appeared inconsistent with legal or regulatory guidelines. For the patient/client management category, 3 subcategories were identified: examination, intervention, and documentation. Furthermore, throughout this category, it was clear that constraints unique to the clinic environment, such as limited time and high productivity requirements, resulted in practice norms that were perceived by students to be in conflict with those taught in the academic setting. Students depicted their responses to curricular dissonance in overwhelmingly negative terms describing emotional reactions such as discomfort, frustration, inadequacy, and stress and, in all but a few
instances, did not take any overt action in response to the dissonance.

These results suggest that there are opportunities for academic faculty to better prepare students for the real world of clinical practice, particularly in the areas of examination and documentation. They also highlight the need to engage in further dialogue regarding the point at which the real world is no longer reflective of a minimally acceptable standard of care. Students need to be better prepared to identify this point and address it when necessary. In addition, organizational structures and professional norms should be further examined and potentially altered so that the academic and clinical environments in which students find themselves do not promote a culture of deference but rather encourage appropriate challenges to existing structures and practices, action, and leadership for change.

REFERENCES


