Attention-deficit/Hyperactivity Disorder and Student Physical Therapists’ Clinical Education Experiences

BY
CORI ANN ZOOK-ARQUINES
B.S., University of Illinois, 2001
B.A., University of Illinois, 2001

THESIS
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Defense Committee:
Ilene B. Harris, Chair and Advisor
Carol Kamin
Janet Riddle
This thesis is dedicated to my husband, Arnold, my children, Paxton and Marley, and my parents, as well as all those who have inspired and faithfully supported me over the years.
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I especially would like to thank the participants in this study for sharing their stories about becoming a physical therapist with ADHD. It is my hope that their stories will enlighten educators and other students with ADHD about what it means to live and work with the disorder.

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SUMMARY

A qualitative study of the perceived impact of Attention-deficit/hyperactivity Disorder (ADHD) symptoms on the clinical education experiences of health professions students was carried out using grounded theory methods. Interviews were conducted with 4 student physical therapists with diagnosed ADHD and who had completed clinical education experiences. Information about demographics as well as perceptions of symptoms of ADHD and impact of ADHD symptoms on clinical education experiences were elicited.

All students experienced symptoms of inattention and/or hyperactivity-impulsivity. The perceived severity of the ADHD symptoms varied. The nature of the disorder, however, was characterized similarly as difficult and continuous “work”. Symptoms of ADHD had an impact on the students’ ability to learn and function as clinicians in the clinical environment. Students’ were able utilize strategies to manage their ADHD symptoms with or without the assistance of others.

Transitional clinical education experiences offered students an opportunity to better understand their ADHD symptoms experiences in the context of professional practice. Opportunities to participate in clinical education experiences increased the students’ self-efficacy; thus, empowering them to gain a greater sense of their professional identities and competencies as persons with ADHD practicing in the health professions.
Attention-deficit/Hyperactivity Disorder and Student Physical Therapists' Clinical Education Experiences

I. INTRODUCTION

Students with Attention-Deficit/Hyperactivity Disorder (ADHD), a disorder that is characterized by a persistent pattern of inattention and/or hyperactivity-impulsivity (American Psychiatric Association, 2013), matriculate into professional (entry-level) programs (Atwoli, Owiti, Manguro, & Ndambuki, 2011; Mosalanejad, Mosalanejad, & Lashkarpour, 2013; Tuttle, Scheurich, & Ranseen, 2010), such as physical therapy, which require training in clinical education environments (Atwoli et al., 2011; Mosalanejad et al., 2013; Tuttle et al., 2010). Transitioning from the classroom to the clinical education environment is a significant process in one’s professional training. This process can be challenging for students with ADHD because of increased occupational demands like functioning in professional roles and the clinic environment. These demands may be greater in complex, fast-paced environments such as acute care settings (Gorman et al., 2010). During times of transition, access to external and internal support resources may be taxed (Folkman & Moskowitz, 2004). For example, during clinical training access to supportive friends or extra time to complete tasks may decrease and one’s ability to sustain attention may be challenged. Symptoms of ADHD may be exacerbated in these circumstances. As a result, students may have functional impairments (Folkman & Moskowitz, 2004) that affect their ability to achieve performance expectations during their clinical education experiences. Therefore, students with ADHD are at increased risk for failure during times of transition (Turgay et al., 2012).

There are few studies about health professions students with ADHD (Bradshaw & Salzer, 2003; Elliott, Arnold, Brenes, Silvia, & Rosenquist, 2007; O’Callaghan & Sharma, 2014; Shrewsbury, 2012) – none of which explore students’ ADHD symptom manifestations during clinical education experiences.
Thus, the impact of ADHD on students' clinical education experiences is not understood and the education needs of these students are not known. The purpose of this study was to elicit the perceived impact of ADHD symptoms on the clinical education experiences of a group of health professions students – student physical therapists who had diagnoses of ADHD.
II. REVIEW OF LITERATURE

ADHD is a chronic neurobiological disorder that is most often diagnosed in children (American Psychiatric Association, 2013) and can persist into adulthood (Biederman & Mick, 2000). ADHD is characterized by a persistent pattern of inattention and/or hyperactivity-impulsivity (American Psychiatric Association, 2013) that has been attributed to deficiencies in behavioral inhibition or in the ability to focus on and control one’s responses to external stimuli (Barkley, 1997). As a result, difficulties with working memory, self-regulation of affect/motivation/arousal, internalization of speech, and reconstitution may occur (Barkley, 1997). For example, in a clinical encounter, a student may have difficulty monitoring their behavior in such a way that would allow them to identify an appropriate goal-directed response to a situation based on an accurate and efficient interpretation of environmental cues. Concurrently, students with ADHD often have deficits in executive functions or lack control of cognitive processes required for planning, organizing, managing time, and follow through with tasks (Boonstra, Oosterlaan, Sergeant, & Buitelaar, 2005). Prevalence rates for ADHD in health professions students are not established; however, the prevalence rate for ADHD for medical students, at one institution in the United States (U.S.), have been estimated at 5.5% (Tuttle et al., 2010).

The number of students with diagnoses of ADHD entering health professions education programs will likely increase both in the short- and long-term. A short-term increase may be due to the use of the recently published DSM-V ADHD diagnostic criteria – a more sensitive measure of adult ADHD (American Psychiatric Association, 2013). In the long term, the ADHD prevalence rates will likely increase because more children are being diagnosed with ADHD (Visser, Bitsko, Danielson, Perou, & Blumberg, 2010) and federal laws require equal access to education (U.S. Equal Opportunity Employment Commission Web site; Wolf, 2001). Health professions educators will need to understand
the impact of ADHD on clinical education and meet the educational needs of students who disclose a diagnosis.

There is a limited understanding of the impairments, functioning, and needs of adults with ADHD (Bolte et al., 2014; Turgay et al., 2012). There is a paucity of literature about students with ADHD published in the health professions. Overviews of anticipated functional impairments, academic support, and ADHD interventions for nursing students (Bradshaw & Salzer, 2003) and of trainee doctors with ADHD (Shrewsbury, 2012), have been published. Another overview focused on the process, rationale, and legal basis for providing academic accommodations during clinical training to psychiatry residents with ADHD (Elliott et al., 2007). In 2012, O’Callaghan and Sharma (O’Callaghan & Sharma, 2014) conducted a quantitative study using two self-report outcome measures to assess the severity of symptoms and impact on quality of life (QOL) in medical students with ADHD. The authors found that reduced QOL was related to severity of symptoms, comorbid disorders, and gender. They also found that students with more severe symptoms used academic accommodations at higher rates than students with less severe symptoms. This is one of the first known studies that directly addressed the perspectives of health professions students regarding their experience with ADHD. Recently, Allen (Allen, 2014) published the abstract of her dissertation – a qualitative study using semi-structured interviews to investigate the experiences of students with ADHD training to be nurses. She found that students were driven to cope with their ADHD to overcome feelings of anxiety and stigma that they experienced because of the disorder. These actions led to experiences of “becoming authentic”, which facilitated students’ appreciation of their individuality. This study provides insight into what it means to be a health professions student with ADHD, but it does not focus on the transitional experience of clinical training.
In 2012, Turgay and colleagues (Turgay et al., 2012) presented the Life Transition Model as a way for health professionals to understand the transitional experiences of persons with ADHD. The Life Transition Model is a framework that can also be used to assist individuals with ADHD to maximize their overall functional capacity by managing their symptoms over time; thus, optimizing their life outcomes. A key component of the model is the idea of “life transitions”. Life transitions are crucial points when individuals make important life decisions (Ben-Shlomo & Kuh, 2002; Schmidt & Petermann, 2009), such as assuming new roles or identities. This conceptual framework highlights the concept of "resource-demand" imbalance (Lazarus, 1993; Turgay et al., 2012). Demands may be environmental, such as performance demands to fulfil requirements of an occupation (Turgay et al., 2012). Resources used to meet demands are both internal and external (Turgay et al., 2012). For example, internal demands include one’s ability to remember, focus, or set goals and external demands include social supports and material supports such as notebooks or medications. When there is an imbalance between demands and resources, individuals can become deficient in their functional capacities, resulting in functional impairments (Folkman & Moskowitz, 2004), regardless of their age (Turgay et al., 2012). Resource-demand imbalances are more prevalent during transitional times in life, increasing the risk for functional impairment in one or more domains of life (Turgay et al., 2012). Student physical therapists who engage in clinical education experiences undergo occupational transitions, thus experiencing changes in the demands and resources available to them. Students with ADHD, and associated executive functional deficits, are at increased risk for occupation-related functional impairments and failure to function effectively in acute care settings, where having intact executive functions, as physical therapists, are essential (Gorman et al., 2010).
By gaining an increased understanding of how student physical therapists with ADHD experience clinical education in acute care settings, physical therapist clinical educators will be better able to meet the needs of these students.
III. METHODS

A. Subjects

Physical therapist students were purposefully sampled with the following characteristics: 1) were at least 18 years old; 2) had a formal diagnosis of ADHD; 3) had completed an acute care clinical education experience; and 4) did not reveal their ADHD diagnosis to personnel at the clinical site or to their clinical instructor prior to the start of their experience. Two-hundred and twenty-four (224) Directors of Clinical Education (DCEs)/Academic Center Coordinators of Education (ACCEs) at 208 accredited Physical Therapist education programs were contacted via email and asked to distribute the recruitment materials (see Appendix A and Appendix B) to current and former physical therapist students in their respective programs. Ten (10) accredited Directors of Clinical Education/Academic Center Coordinators of Education did not receive recruitment emails due to lack of contact information. Supplemental recruitment strategies used were follow-up phone calls to DCEs/ACCEs (see Appendix C) and local distribution of recruitment materials at an educators’ meeting (see Appendix D). Screening for participation in the study was conducted by the principal investigator using a standardized screening tool (see Appendix E). Fifteen (15) student physical therapists expressed interest in participating in the study, but only five (5) current and former student physical therapists met the inclusion criteria and volunteered for individual in-person (N = 1) or Skype (N = 4) interviews. One participant was withdrawn from the study by the principal investigator prior to completing the interview due to unexpected issues pertaining to the inclusion criteria.

B. Research Design

We used a qualitative case series research design and grounded theory methods to explore physical therapist students’ perspectives about the symptoms and effects of ADHD on their acute care
clinical education experiences. Qualitative research is an appropriate method to explore a phenomenon as experienced by an individual (Harris, 2002). Grounded theory is a qualitative research method that provides a systematic approach to empirically collect, analyze, and present data (Harris, 2002, 2003), resulting in generation of a conceptual model about the phenomenon being studied. Students’ perspectives about the impact of ADHD on their clinical education experience were elicited via individual semi-structured interviews with open-ended questions – a method commonly used for data collection in qualitative research (Harris, 2002). Semi-structured interviews allow for a directed, yet fluid, line of inquiry that is responsive to the perspectives of the interviewee, thus, grounding the exploration of “meaning” of the phenomenon being explored in the data (Harris, 2002). Interview recordings were supplemented with field notes written at the time of the interviews. Multiple researchers participated in the data analysis process to maximize the overall trustworthiness of the data (Harris, 2002).

C. Data Collection Procedures

After obtaining written or audio recorded informed consent, including permission to audio record the interview, each student completed a short survey that was used to collect data about demographics, ADHD diagnosis/management, and physical therapist education history (see Appendix F). An introduction to the interview and follow-up procedures was conducted. Each participant was interviewed using a semi-structured interview protocol that contained 16 open-ended questions, with follow-up question prompts (see Appendix G). The interview guide was designed to explore how student physical therapists with ADHD experience the transition from student to clinician in the acute care setting. Questions were asked pertaining to symptoms of ADHD, the experience of ADHD relative to physical therapist occupational demands, ADHD and learning, disclosure of diagnosis, ADHD and quality of life,
and general reflections about the acute care clinical education experience. The Patient/Client Management Model ("Guide to Physical Therapist Practice," 2001) and the Physical Therapist Clinical Performance Instrument (Physical Therapist Clinical Performance Instrument: Version 2006, 2008), were used as frameworks to develop the interview questions regarding role-related occupational demands and were referenced during the interview process. The Patient/Client Management Model ("Guide to Physical Therapist Practice," 2001) presents a systematic framework for the management (i.e., examination, evaluation, diagnosis, prognosis, intervention, and outcomes) of patients across the Physical Therapy profession. The Physical Therapist Clinical Performance Instrument (PT CPI) (Physical Therapist Clinical Performance Instrument: Version 2006, 2008) is a tool used to assess students’ performance and competence in three areas of physical therapist practice (i.e., professional practice, patient management, and practice management) in the clinical education setting. Each student participated in 1 interview that took approximately 60 minutes. Digital audio recordings of the interviews were transcribed verbatim. The transcripts were sent to each participant for review and feedback to ensure accuracy.

D. Data Analysis

The transcripts were analyzed to identify themes, using the constant comparative method associated with grounded theory (Charmaz, 2014; Harris, 2003). The themes that were identified during the initial transcript analysis were compared with themes identified by an independent reviewer, with expertise in qualitative data analysis (IH) – a method known as coder reliability (Harris, 2002). Upon comparison of the separate analyses, thematic agreement was achieved.
E. Trustworthiness

Trustworthiness of the data analysis was achieved in three ways. Throughout the interviews, I recorded field notes that were analyzed in relation to the transcripts. Coder reliability, a method by which individual researchers achieve consensus on identified themes and sub-themes, through a process of discussion and refinement of themes, thus improving the trustworthiness of the data analysis, was conducted. Finally, participants were asked to review the interview transcripts and thematic analysis for accuracy – a strategy known as “member checking” (Harris, 2002).

Themes presented in the results section of this thesis reflect the perspectives of the majority of the participants. For example, although there are more quotes presented from Interviewee 3, the quotes in and of themselves reflect the voice of three or more of the student physical therapists. Themes presented explicitly as the voice of less than the majority are stated as such. These approaches to reporting the results were taken to reduce reporting bias.
IV. RESULTS

The students in this study had ADHD symptoms, at baseline, which influenced the way they experienced their lives regardless of their life roles. Upon entry into the clinic as student physical therapists, ADHD symptoms impacted learning in both negative and positive ways. As the students assumed their roles as clinicians in the clinical environment, ADHD symptoms were exacerbated by increased occupational-demands in the context of the clinic. Worsened ADHD symptoms resulted in occupation-related functional impairments. Despite the functional impairments and changes in quality of life, through their own actions, and the actions of others, the students managed aspects of their ADHD. Through their transitional experiences, the students were able to learn about themselves, as professionals, and their ADHD. These lessons also helped students to identify their niche in professional practice. These experiences led to increased self-efficacy and empowerment as health professionals who happen to have ADHD. Findings from this study suggest that, as a result of their clinical education experiences, students developed a greater sense of professional identity/competence as persons with ADHD practicing in the health professions.

A. Experiencing ADHD

The students had both common and unique experiences with ADHD symptoms in terms of the types of symptoms experienced and the conditions under which they were exacerbated. All of the students experienced symptoms of inattention. Two of the students also reported symptoms of hyperactivity-impulsivity. The symptoms of inattention they experienced most frequently were: difficulty in organizing tasks/activities, sustaining attention, remembering, and being easily distracted by extraneous stimuli. For example, one student commented, “There would be someone else talking to another patient in the same room and just having the background noise going on would just be really
difficult for me to concentrate on what I was doing.” (I 4) Two participants explicitly reported symptoms of hyperactivity-impulsivity, such as being “energetic” (I 3) or having difficulty waiting. One student commented, “My CI would always ask me, ‘Do you have any questions?’ I would say, ‘No.’ [I] would follow it with the question, like two seconds later. I just impulsively answered the question . . . I do that.” (I 2)

The nature and severity of ADHD symptoms influenced the students’ QOL. The nature of ADHD was characterized as “work” that was continuous, “difficult”, and felt like a “struggle” to live with and/or to manage. The work required more effort for symptoms of inattention than hyperactivity-impulsivity. For example, one student commented, “The way that I [have] described it to people who do not have it is that if they took their absolute most difficult day in their entire life to focus and pay attention on a task . . . that is pretty much every day at baseline for me . . . it is very difficult” (I 3). Perception of ADHD symptom severity was not a function of the number or types of symptoms that a participant had, but was directly related to how much “work” or how difficult the struggle felt. For example, one participant had symptoms of both hyperactivity-impulsivity that had a significant impact on his life experience, but the impact was not as cognitively and physically taxing as another participant who experienced inattention alone. For example, the latter participant commented, “. . .even ther, I would end up coming home and not feeling like doing anything.” (I 4) Although the nature of the ADHD experience was similar across all students, the perceived severity of the ADHD symptoms experienced was variable, ranging from no perceived impact on quality of life to generally feeling overwhelmed.
B. Transitioning from the Classroom to the Clinic

1. ADHD, LEARNING, AND THE CLINICAL ENVIRONMENT

Upon entry into the clinical education environment, the students described learning that was both harder and easier than being in the classroom. It was harder because of the interaction of ADHD symptoms with attributes of the clinical environment. For example, students were distracted by the busy clinic environment. One student commented, “I was super easily distracted [while documenting at the nurses station]... 'cause they were talking about my patients or someone [another patient] who was more interesting than my patient. So I did get easily distracted.” (I 2) On the other hand, learning to be a clinician in the acute care setting was easier than learning in the classroom for three of the students because of congruence between the clinic setting, ADHD symptoms, and learning needs. One student commented, “I like the transition a lot. I found it a little easier because when you're up and being active and interacting with people, it's easier to pay attention.” (I 1) Students’ abilities to learn in the clinical environment were influenced by the interaction between the symptoms of ADHD and attributes of the learning environment – each of which could have either a negative or positive effect on learning.

Learning to be a clinician with ADHD, while working in the acute care setting, added a layer of complexity to the learning process. For example, at times, ADHD symptoms impacted the students’ abilities acquire knowledge as well as to refine clinical skills while engaged in clinical tasks. One student commented about an instructional method that, alone, was ineffective because of the symptom of inattention, “I didn’t like that you have to observe. So just watching my CI treat other patients... it’s not as exciting when you have been doing it for a while. So, it’s hard to pay attention then.” (I 1) Another student commented about his communication ability being impacted by the symptom of disorganization, as follows, “But then taking that stuff [data collected from the patient evaluation],
organizing it real-time, and then presenting that information that is an appropriate manner as well as explaining why you did all this stuff and what it all means.” (I 3) Learning to think and/or function as clinicians while working was also impacted by the students’ symptoms of ADHD.

2. ADHD SYMPTOMS EXACERBATION

During the initial phases of clinical training, students experienced exacerbated ADHD symptoms because of the demands of their roles as physical therapists in busy, fast-paced clinical environments. For example, one student commented about worsening distractibility in the clinical setting, “I think maybe the documentation was the hardest part, especially because you’re usually documenting around a ton of people with a lot of stuff going on so; that would be the most challenging part.” (I 1) When the demands of the occupation and/or environment exceeded the students’ available supportive resources the students’ experienced occupation-related functional impairments.

3. OCCUPATION-RELATED FUNCTIONAL IMPAIRMENTS

Occupation-related functional impairments were described as subpar job performances. Subpar performances were characterized by reduced efficiency, increased need for guidance/supervision, decreased ability to manage more complex tasks or patients, reduced quality, and inconsistency. For example, one student commented about his performance related to the provision of care and being able to remember information while engaged in the provision of care. He commented, “... then just being able to keep that [information provided by CI] in mind and see the patients in a timely manner. And you know safely seeing them... that was what was difficult, I think.” (I 4) Occupation-related functional impairments experienced most frequently were: decreased written and oral communication efficiency due to symptoms like distractibility and/or disorganized thinking or approach to documentation; decreased efficiency or accuracy with clinical reasoning due to symptoms like inattention to details or
disorganized thinking, and inconsistency with data gathered during patient interviews due to symptoms like inattention and forgetfulness. The students engaged in patient and practice management, but their capacities to perform at their fullest potentials were initially reduced. The students’ experiences with occupation-related functional impairments were mediated by management of their ADHD symptoms.

4. **ADHD Management**

The students’ ingenuity, relative to learning to manage their ADHD in their new context, was experienced as a facilitator to learning and occupational functioning. Ingenuity was reflected by the students’ ability to identify new skills and/or strategies to overcome their symptoms. One ADHD-specific skill that two of the students described developing was mindfulness – an intentional cognitive process of: being present in the moment; being aware of their ADHD symptoms; monitoring the manifestations of their symptoms relative to the task and/or behavior; and making in-the-moment adjustments to counteract their ADHD symptoms. For example, one student commented,

“for me it was definitely more at the forefront of my mind... this... whole other element of... you need to behave this way... I think it definitely was a challenge with having ADHD to have that conscious thought... it’s not necessarily the skill that you learned in PT school... I don’t know that it’s a skill that necessarily shows up in terms of an assessment. I think it’s kind of one of those intangibles that... for most people I think it comes easy”

All of the students, in one way or another, implicitly described using this same cognitive process to overcome their symptoms of ADHD. The students’ abilities to train themselves in skills to facilitate their learning and occupational performance demonstrated not only ingenuity, but also problem-solving skills.

In addition to mindfulness, the students also recognized their ability to utilize the resources, internal and external, available to them to manage their ADHD symptoms and to function at their fullest capacities, personally and professionally. There were a variety of internal resources students used to address issues like QOL and functioning in the clinic. For example, one student commented about
maximizing her QOL, “I just had to make sure that I was getting a good amount of sleep every night and eating well just so . . . that my mental capacity was as good as it could be. Just naturally from those things.” (I 1). The way the student changed her approach to her psychological and physical health could be seen as an adaptive strategy. However, in the clinic the students identified and used contextually relevant adaptive strategies that were multifaceted. Examples include simple adaptations such as finding quiet spaces to work, using notes to focus and remember, and manipulating the use of time (e.g., making time, thinking about issues at a later time, or rushing against time to complete a task), to more complex meta-cognitive approaches, such as using “mindfulness” paired with the process of “self-talk” or talking to oneself in the mind, silently. For example, one student commented, “I feel like although I have to consciously do it . . . I can be a very good listener. . . . it takes a lot [of] . . . effort on my end . . . I do have to be telling myself to be paying attention and listen . . . I am constantly having to tell myself to focus . . . to look for . . . triggers and to look for . . . stimuli.” (I 3) "Redefining the work" was another cognitive process used by the students. It was a way for the participants to create structure and boundaries for their work within the context of their symptoms. One participant commented, “I like to just get rid of lists. So, checking off still feels like part of the work. . . . I did want to check everything off, but at the end I just wanted to put the list in the shredder bin. That felt like a reward.” (I 2) Lastly, the students were able to manage their symptoms of ADHD as well as improve their occupational task performance, by using their “values as motivators”. For example, one student commented about how he valued the opportunity to serve patients and how this value gave him “a reason to pay attention”. Another participant commented about her value of learning and how she used it to reframe her perception of an educational experience, “So I just went into that mindset, [it] just takes a lot of effort to focus . . . I just have to keep in mind that it’s still a valuable experience to observe [and learn]. And so just keep that in mind.” (I 1)
External resources, such as interpersonal relationships (e.g., physical therapist educators, family), served as both facilitators and barriers to the students’ professional development, before and during their clinical education experiences. Two of the students’ clinical education experiences were facilitated by pre-planning personal responsibilities with family and professional responsibilities with physical therapist program faculty. One student commented,

“I actually had a couple of professors in school that were . . . privy to the situation . . . voluntarily . . . telling them . . . letting them know . . . my situation . . . they did a very a good job of it [preparing me] before each clinical rotation [by posing questions to consider]. . . . ’what are the things that . . . may be a barrier or may be an issue?’ . . . identifying those things going into each clinical rotation. I think really . . . helped because [the clinical instructor] never really got to a point where [they said], ‘Hey this is a weakness. Something that you have to work on.’ . . . it was . . . like . . . we already teased out some . . . of [the] things that would be difficult for me. So I can consciously go in and have that in mind with, you know with each [clinical education experience]. So that helped, I think that helped a lot.” (13)

During the clinical education experience, clinical instructors’ facilitated students’ learning and functional capacity by providing and/or adjusting the management and structure of the learning experiences – without knowledge of the students’ ADHD diagnoses. For example, one of the students commented, “The other thing that I would do . . . my clinical instructor helped me with . . . I don’t think we actually had a discussion about this, but she would let me lead treatment for two patients and then she would go see another patient on her own while I did documentation. And that was so nice to just have the time that I needed to go through all of my notes . . . it made a huge difference.” (12) However, the clinical instructors’ actions (e.g., modifications to schedules, caseloads, or time) could also be detrimental to the development of the student, in becoming more efficient and independent. Modifications, in this case, may have given the students an inaccurate assessment of their skills and a false sense of their occupational capacities.
C. Reconciliation: Living and Working with ADHD

1. Self-Assessment

Throughout their clinical education experiences, the students reflected upon their experiences with ADHD as clinicians. This process involved the analyses of actual experiences with ADHD and occupational performance as compared to the students’ own expectations of performance. For example, one student commented about an occupation-related functional impairment in terms of written communication, efficiency, and impact on productivity, “doing that [documentation] in an efficient way was hard. I think . . . the efficiency piece was the one thing that I always had . . . an element to improve [on]. . . . I mean, yeah . . . I feel like that I definitely did not see as many people [compared to others] because of it, the documentation piece of it.” (I 3) The students described an incongruity between their actual and expected occupation-related functional performance. This performance, without ADHD management, was below their personal expectations.

Students’ self-assessment of their learning and performance improvement, relative to their symptoms of ADHD, as well as other students and/or clinicians, was a part of the process of learning to be a clinician. For example, one student commented, “There were two other students from different programs that were there at the same time I was . . . we all . . . struggled . . . at first, but they were able to get a lot farther than I did with how many patients they were seeing and how many notes they were writing in a day. . . . I hardly saw any improvement in my time and how quickly I could write. So, yeah, I definitely think that [ADHD] was part a part of it.” (I 4). Self-assessment led to an awareness of their slower rate of learning and performance improvement experienced as a result of symptoms of ADHD.

In addition to awareness of ADHD’s impact on their learning and clinical performance, students experienced lessons in ADHD management during their clinical education experiences. One student
commented, “It was definitely a wake-up call for me as far as, okay, well maybe it’s not something that I can say, ‘oh, yeah well I have it.’ You know, I can just do everything like everyone else can. Um... It was definitely more of, that it made me realize I need to think about how it affects my life and how to plan for it.” (I 4) Through the process of self-assessment, students experienced the impact that ADHD would have on their professional identities. These impacts, however, may also facilitate the development of positive behaviors, like planning ahead that might positively influence their professional identity formation.

Professional identity in the contact of professional practice setting was also informed by students’ assessments. Positive self-assessments of functional capacity in the clinical environment were related to reports of compatibility in the setting of practice and vice versa. One student commented, “I definitely don’t do well with jobs that will need to be like really fast paced like that... I learned that I like peace and quiet as opposed to chaotic.” (I 4) Identifying which aspects of a clinical setting are not conducive to functioning as a clinician with ADHD may also be an informative lesson for students. Student physical therapists with ADHD may choose to practice in the area of acute care clinical physical therapy, not because their ADHD symptoms are minimized or because their ADHD symptoms facilitate their success, but because the environment and work roles minimize the impact of their symptoms more than in other clinical environments.

2. **SELF-EFFICACY AND EMPOWERMENT**

Despite their differences, during their experience in the acute care clinical setting, each of the students gained a greater degree of awareness of their skills as clinicians and what role ADHD would play in their professional lives. A student commented, “I guess I learned that it’s not, for me personally... it wasn’t as big of a deal as I thought it was going in.” (I 3) Another student commented, “I learned
that it’s [ADHD] manageable. I can treat patients effectively without [my taking] medication. I can use those strategies and I think it will be okay.” (I 1) Awareness that ADHD could play only a minor role in their professional lives led to a greater sense of self-efficacy. One student commented, “I learned a lot of strategies that I have to take with me, especially when I don’t have the clinical instructor hovering over me to increase my efficiency. You know I’m going to have to find quieter areas to document and things like that.” (I 1). Increased self-efficacy led to a feeling of empowerment. One student commented, “At the end I learned that . . . with this condition, with ADHD, that I’m going to be able to do this [be a physical therapist]. That was . . . the main thing when I left there.” (I 3)
V. DISCUSSION

This study expands the scope of what is already known about health professions students with ADHD by describing their experiences with the disorder during a transitional experience, such as clinical education. The results of this study suggest that the student physical therapists' experiences of ADHD in the clinical education environment focused on resolving the tensions between wanting to fulfill the role of physical therapists with the reality that ones’ learning processes and professional development experiences are different than others because of symptoms of ADHD. Over the course of their training, the students’ experiences are characterized by complex interactions between ADHD symptoms, occupation-related factors, and personal factors. The experience of these interactions are akin to viewing the world through multiple lenses, such as a “person” lens plus an ADHD lens, a student lens, a clinician lens and so on. These experiences afford students with ADHD an opportunity to better understand their disorder, and its impact on their experience, in the context of professional practice. The outcome of these experiences was a greater degree of self-efficacy, empowerment and ADHD management, and awareness of professional identity and professional competencies. The findings of this study suggest that, during clinical education experiences, ADHD does have an impact on the experiences of students with the disorder and that development of professional identity and competence may be influenced by these impacts.

The experiences of the students in this study exemplify the complexity that ADHD adds to the already complex process of training to be a clinician in the clinical environment. Health professions educators can better understand the complexity of their students’ ADHD and clinical education experience by using the ADHD Life Transition Model (Turgay et al., 2012). Although the model was intended to maximize patients’ psychological health during transitional phases, it can also be used to
manage students’ educational experiences because “life transitions” parallel occupational transitions. For example, consistent with the ADHD Life Transition Model, students in this study experienced “changing symptom manifestations” as they transitioned into the clinical environment. The student cases in this study provide health professions educators with examples of how students’ ADHD symptoms may manifest when they are exacerbated. Educators can use this knowledge and the ADHD Life Transition Model to analyze potential issues as they relate to student-specific ADHD symptoms to identify solutions to the challenges the students may face. Alongside the ADHD Life Transition Model, educators can also use the concept of resource-demand imbalance to identify and assess the potential interactions between students’ available resources and the demands associated with various professional roles and clinical education environments.

An imbalance between support resources and functional demands placed on students during their transition from student physical therapist to clinician in the acute care clinical education environment resulted in changes in the ways that their ADHD symptom manifested. The students’ changes in symptoms were amplified by the occupation-related demands. Students in this study experienced changes in ADHD symptoms, with inattentiveness being greater than hyperactivity and impulsiveness, while functioning as student physical therapists in the clinical setting. Subsequently, the students experienced functional impairments that impacted their occupational performance. This finding is consistent with the “Resource-Demand Imbalance” model (Turgay et al., 2012).

It is recommended that health professions educators appreciate that ADHD may have an impact on the clinical education experiences of students with the disorder. The impact will likely be variable as demonstrated by the four student cases presented in this study. None-the-less, students with ADHD in the health professions have unique transitional experiences. As they learn to be clinicians they must also
learn to live with and/or manage any symptoms of ADHD that have an impact on their occupational performance in order to succeed. These processes, living with and/or managing ADHD, are internal in nature. As a result, health professions educators may not easily recognize symptoms of ADHD or the impact of ADHD on the students they work with. However, health professions educators may be able to identify occupation-related functional impairments more readily.

Health professions educators who are able to recognize occupation-related functional impairments may be able to consult with and advise students who are experiencing difficulties in clinical practice in a more meaningful way. Understanding the concepts of life transitions and what this means for the balance of resources and demands uniquely positions health professions educators to assist students in identifying the etiology of experienced difficulties within the context of their professional practice, regardless of diagnosis. For example, once an occupation-related functional impairment is identified, an educator may explore the demands of the occupation and/or environment relative to the resources of the student to identify deficiencies and solutions. For the students in this study, an educator may use their knowledge of ADHD symptoms, and manifestations thereof, to explore a specific line of questioning, such as the impact of the environment on concentration, that without knowledge of the results of this study might not be explored otherwise. Crucial conversations about performance may also present opportunities for health professions educators to initiate conversations about known learning difficulties or suspected learning difficulties identified by students. If warranted, health professions educators could provide students with referrals to student services that may help them explore their learning needs further, such as ruling in or out a diagnosis that impacts learning or providing accommodations in the presence of confirmed diagnoses. By taking the proposed actions, health professions educators may be able to maximize the abilities of students’ who are having difficulty
adjusting to the clinical environment, regardless of diagnosis. Measures such as these may effectively reduce any student’s risk for failure.

Despite the role of health professions educators in the clinical education experiences of students with ADHD, health professions educators need to recognize the benefit of transitional experiences, like clinical education, for students with the disorder.

A. Limitations and Future Directions

Research recruitment materials were sent to DCEs/ACCCEs of physical therapist programs who 1) acted as gatekeepers for the dissemination of the research materials and 2) had limited published contact information. These factors may have contributed to the small sample size. Sending recruitment materials directly to students was necessary to increase potential sample size as well as the potential for theoretical saturation of themes which may have resulted in improved transferability of the findings. The student physical therapists who self-selected for participation in this study successfully completed their clinical education experiences without revealing their diagnosis, which may have affected the findings. A similar study of student physical therapists with ADHD who had not experienced success during their clinical education experiences and/or had revealed their diagnosis to the clinical site and/or clinical instructor is needed to better inform physical therapist educators of the needs of students with ADHD across the spectrum of the disorder. Likewise, symptoms of inattention were most frequent amongst the participants. Investigation of the impacts of hyperactivity and impulsivity are needed to better explicate the phenomenon being studied. Lastly, several of the participants had a time lapse between their acute care clinical education experience and the time of the interview which may have influenced their perceptions of their experiences. Interviews with students immediately post-completion of their acute care clinical education experiences are needed in order to eliminate a time bias.
VI. CONCLUSIONS

The purpose of this study was to explore the symptomatology and effect of ADHD on the experiences of student physical therapists with ADHD who completed acute care clinical education training experiences. The results of this study suggest that clinical education experiences are contextually relevant, transitional opportunities for students with ADHD to live through the charging manifestations of their symptoms and subsequent functional impairments leading to the discovery of the manageability of their disorder, functional capacity, self-efficacy, empowerment, and professional identity awareness. Health professions educators are in a unique position to understand that: ADHD is merely a facet of one’s being and not their whole being; ADHD does have an impact on clinical education experiences; ADHD is manageable and; they can facilitate the professional development of health professions students with ADHD. As one student physical therapist so poignantly stated, “you can be successful with this. . . it’s [ADHD] something that does not have to define you or be a hindrance. . . it’s . . . a part of you.” (I 3)
CITED LITERATURE


Harris, I. B. (2003). What does "The discovery of grounded theory" have to say to medical education? Advances in Health Sciences Education, 8(1), 49-61.


APPENDICES
APPENDIX A

Research Recruitment Email

Subject: Research recruitment request – Impact of ADHD on PT clinical education experience

Dear [Insert name of Director of Clinical Education],

My name is Cori Zook-Arquines and I am a PT seeking a Masters of Health Professions Education (MHPE) degree. As a part of my studies, I am required to complete a thesis. I will be conducting a study that will explore the symptomology and effect of ADHD on the acute care clinical education experiences of physical therapy students who have been diagnosed with the disorder. The goal of this study is to increase the awareness of ADHD symptoms in adults and how these symptoms impact the functioning of physical therapy students in clinical education environments.

I am writing you, as a Director of Clinical Education, to request your assistance in distributing the study materials (i.e. email and flyer) – hard copies of the flyer are available upon request. If possible, I would ask that you: 1) post the flyer in a location where physical therapy students will be able to see and review it; and 2) send the flyer as an email attachment to current and former physical therapy students for their review and consideration. To maximize the ease of the distribution of the study materials to the students, I have formatted this email in such a way that you may forward this email directly to the students after you have deleted all of the text above the bolded dividing line below.

If you choose not to distribute the recruitment materials, I would sincerely appreciate if you would send me an email with your decision not to post.

I will be recruiting subjects from accredited physical therapy programs across the United States; therefore, I am hopeful that I will generate enough student interest in this study. I would like to be able to follow-up with you, though, via telephone if in one week I have not met the criteria for the minimum number of subjects. The purpose of this follow-up phone call will be to make an additional effort to request your assistance in distributing the study materials to the physical therapy students. If you have made the decision not to assist in the distribution of the study materials, but had not contacted me with this decision, then this decision will be noted, respected, and you will not be contacted again. If you would not like me to follow-up with you, please feel free to send me an email response stating your request.
APPENDIX A (continued)

I would like to sincerely thank you for your time and your willingness to review this email.

Sincerely,

Cori Zook-Arquines, PT, CLT, MHPE candidate
Co-Director of Clinical Education
Midwestern University
555 31st Street

Alumni Hall, Room 340M
Downers Grove, IL 60515
Phone: 630.532.9168
E-mail: CZAMHPE@gmail.com

PLEASE DELETE ALL INFORMATION ABOVE THIS BOLDED LINE. THEN FORWARD EMAIL TO CURRENT AND FORMER PT STUDENTS. THANK YOU.

Subject: Research recruitment request – Impact of ADHD on PT clinical education experience

Dear Physical Therapy Students and Graduates,

My name is Cori Zook-Arquines and I am conducting a research study about physical therapy students who have Attention-deficit/hyperactivity disorder (ADHD) and their experiences during their acute care clinical education placements. The goal of this study is to increase the awareness of ADHD symptoms in adults and how these symptoms impact the functioning of physical therapy students in clinical education environments.

If you have been diagnosed with ADHD and have completed your acute care clinical education experience, I would like to take this opportunity to 1) ask you to review the additional information about the research study included below and 2) request that you consider participating in the study.

**Research Description & Purpose:** The impact of ADHD on the educational experiences of physical therapy students with ADHD who are making the transition from the classroom to the clinic are not well known. The educational needs of students with ADHD are also not known. The purpose of this study is to explore the symptoms and effect of ADHD on the acute care clinical education experiences of physical therapy students who have been diagnosed with ADHD.
APPENDIX A (continued)

Will the study be a good fit for me? This study may be a good fit for you if:
You are or were a physical therapy student in an accredited physical therapy program
You have ADHD that has been diagnosed by a qualified health care practitioner

You have completed an acute care clinical education experience
You did not tell your clinical site or clinical instructor that you had ADHD before the start of your
clinical education experience
You are at least 18 years old

What will happen if I participate? If you decide to take part in the research study, you would:
Complete a demographic survey
Provide a de-identified copy of your Acute Care Clinical Education Experience Clinical Performance
Instrument (requested, but not required)
Undergo a one-time, 1 hour interview
Reference the Physical Therapy Clinical Performance Instrument
Reference the Patient/Client Management Model
Asked to review and provide feedback of the interview transcript and study results
Participants who take part in this study will not be compensated for their time.

Location of Research: This study will take place in a private location on the University of Illinois at
Chicago Campus or at a location of your choice via Skype.

PI Name and Department: The principal researcher for this study is Cori Zook-Arquines at the
University of Illinois at Chicago, Department of Medical Education, UIC Research Protocol #: 2013-0805

I would like to sincerely thank you for your time and consideration. If you would like to take part in this
research study or if you would like more information, please call me at: 312-996-3700 or email me:
czook1@uic.edu

Sincerely,

Cori Zook-Arquines, PT, CLT, MHPE candidate
Co-Director of Clinical Education
Midwestern University
555 31st Street
Alumni Hall, Room 340M
Downers Grove, IL 60515
Phone: 630.532.9168
E-mail: CZAMHPE@gmail.com
APPENDIX B

Research Recruitment Flyer

A Research Study About
Physical Therapy Students
Attention-deficit/hyperactivity disorder (ADHD)
And Acute Care Clinical Education

Research Description & Purpose: The impact of ADHD on the educational experiences of physical therapy students with ADHD who are making the transition from the classroom to the clinic are not well known. The educational needs of students with ADHD are also not known. The purpose of this study is to explore the symptoms and effect of ADHD on the acute care clinical education experiences of physical therapy students who have been diagnosed with ADHD.

Will the study be a good fit for me? This study may be a good fit for you if:
You are or were a physical therapy student in an accredited physical therapy program
You have ADHD that has been diagnosed by a qualified health care practitioner
You have completed an acute care clinical education experience
You did not tell your clinical site or clinical instructor that you had ADHD before the start of your clinical education experience
You are at least 18 years old

What will happen if I participate? If you decide to take part in the research study, you would:
Complete a demographic survey
Be asked to provide a de-identified copy of your Acute Care Clinical Education Experience PT Clinical Performance Instrument (requested, but not required for participation in interview)
Undergo a one-time, 1 hour interview
Reference the Physical Therapy Clinical Performance Instrument
Reference the Patient/Client Management Model
Be asked to review and provide feedback of the interview transcript and study results
Participants who take part in this study will not be compensated for their time.

Location of Research: This study will take place in a private location on the University of Illinois at Chicago Campus or at a location of your choice via Skype.

Contact Information: To take part in this research study or for more information, please call: 312-996-3700 or email: czook1@uic.edu

PI Name and Department: The principal researcher for this study is Cori Zook-Arquines at the University of Illinois at Chicago, Department of Medical Education, UIC Research Protocol #: 2013-0805
APPENDIX C

Director of Clinical Education Follow-up Phone Call Verbal Recruitment Script

1) PI: May I speak with [name of Director of Clinical Education].

2) PI: Hello [name of Director of Clinical Education]. My name is Cori Zook-Arquines and approximately one week ago I sent you an email requesting your assistance in distributing some research materials regarding a study that I am conducting about students with ADHD who have completed their acute care clinical education experiences. Do you have time to talk?
   a) If so, PI: Great, thank you. I am contacting you today because I am trying to recruit additional participants for my study and I am seeking your help. To that end, I was wondering, if you were able to distribute the study materials regarding students with ADHD and acute care clinical education to your current and former physical therapy students?

3) Note: [If the Director of Clinical Education asks me to restate the information about the study, I will read the following: I will be conducting a study that will explore the symptomology and effect of ADHD on the acute care clinical education experiences of physical therapy students who have been diagnosed with the disorder. The goal of this study is to increase the awareness of ADHD symptoms in adults and how these symptoms impact the functioning of physical therapy students in clinical education environments. Then I will return to the script.]

   i) If so, PI: I sincerely appreciate your effort and participation in the distribution of the study materials. However, I am still seeking a few more participants. If I sent the materials to you again, would you be willing to re-send the information one more time?

   (1) If so, PI: Great, then I will resend the study recruitment information to you for redistribution to the students within the next 24 hours. The email will come from CZAMHPE@gmail.com. And again, I would sincerely like to thank you for your effort, participation, and time. Have a good day/night. [End call.]

   (2) If not, PI: May I ask if there were any barriers to you receiving and/or distributing the study materials?

   (a) If so, I will make note of their response for consideration. PI: Is there any possibility that you may be able to overcome the barrier(s)?

   (i) If so, PI: Great. I really appreciate your effort and willingness to help me overcome those barriers.

   1. Follow-up question, PI: If I may ask, what would be a reasonable timeframe in which you will know whether or not you will be able to
   i. overcome the barrier(s)? [This information will be used to inform question 2.1.1.2.1.1.2].

   2. Follow-up statement, PI: Ok. If you are able to overcome the barrier(s) and you would like me to send you the study recruitment materials via email or via U.S. Mail, please contact me via email me at CZAMHPE@gmail.com or call me at 630-532-9168.
APPENDIX C (continued)

3. Follow-up statement. PI: And, if you are not able to overcome the barrier(s), please let me know via email at CZAMHPE@gmail.com or call me at 630-532-9168. I will certainly respect and honor any decisions that are made and will not forward the study recruitment materials along. If I don’t hear from you within [the timeframe specified above in item 2.1.1.2.1.1.1], I will assume that you were not able to overcome the barrier(s) and will not resend the study recruitment materials to you again.

4. Follow-up statement. PI: Either way, I want to sincerely thank you for your time and effort. Have a good day/night. [End call.]

(ii) If not, PI: I understand. Regardless, I would like to thank you for your time. Have a good day/night. [End call.]

ii) If no, PI: May I re-send the recruitment email and attachments for you to distribute?
   (1) If yes, PI: I will re-send the information. PI: Great, then I will resend the study recruitment information to you for redistribution to the students within the next 24 hours. The email will come from CZAMHPE@gmail.com. And again, I would sincerely like to thank you for your effort, participation, and time. Have a good day/night. [End call.]

(2) If not, PI: May I ask if there were any barriers to you receiving and/or distributing the study materials?
   (a) If so, I will make note of their response for consideration. PI: Is there any possibility that you may be able to overcome the barrier(s)?
   (i) If so, PI: Great. I really appreciate your effort and willingness to help me overcome those barriers.
   1. Follow-up question, PI: If I may ask, what would be a reasonable timeframe in which you will know whether or not you will be able to overcome the barrier(s)? [This information will be used to inform question 2.1.1.2.1.1.2].
   2. Follow-up statement, PI: Ok. If you are able to overcome the barrier(s) and you would like me to send you the study recruitment materials via email or via U.S. Mail, please contact me via email me at CZAMHPE@gmail.com or call me at 630-532-9168

3. Follow-up statement. PI: And, if you are not able to overcome the barrier(s), please let me know via email at CZAMHPE@gmail.com or call me at 630-532-9168. I will certainly respect and honor any decisions that are made and will not forward the study recruitment materials along. If I don’t hear from you within [the timeframe specified above in item 2.1.1.2.1.1.1], I will assume that you were not able to overcome the barrier(s) and will not resend the study recruitment materials to you again.

4. Follow-up statement. PI: Either way, I want to sincerely thank you for your time and effort. [End call.]
APPENDIX C (continued)

(ii) If not, PI: I understand. Regardless, I would like to thank you for your time anyway. Have a good day/night. [End call]

(b) If no, PI: Ok. Well, I appreciate your time anyway. Have a good day/night. [End call.]

b) If no, PI: Is there a better time for me to call back?

   i) If yes, I will gather that information. PI: Ok, then, I will call you back then [time specified in 2.2.1]. In the meantime, I would like to sincerely thank you for the opportunity to talk with you. [End call.] When I return the call at the time planned, I will refer back to the script above starting with item 1.

   ii) If not, and they would prefer that I not call back, then I will not call back. PI: Ok then. Thank you for your time. Have a good day/night. [End call.]
APPENDIX D

Professional Meeting Verbal Recruitment Script

PI: Good morning/afternoon/evening everyone. For those of you who do not know me, my name is Cori Zook-Arquines and I am a physical therapist who is seeking a Master of Health Professions Education degree. As a part of my thesis work I will be conducting a study that will explore the symptomology and effect of ADHD on the acute care clinical education experiences of physical therapy students who have been diagnosed with the disorder. The goal of this study is to increase the awareness of ADHD symptoms in adults and how these symptoms impact the functioning of physical therapy students in clinical education environments.

I will be recruiting subjects from accredited physical therapy programs across the United States and I am hopeful that I will generate enough student interest in this research. However, the reason that I am bringing this study to your attention today is because I would like to ask you for your help in the recruitment of subjects by disseminating the information about this study to the physical therapy students in your physical therapy programs. With that being said, and if you are interested in helping me in this process, I do have study flyers available for you to take for distribution.

Lastly, I would like to take this opportunity to sincerely express my appreciation for your time and any efforts that you might put forth to assist me in the recruitment of subjects for this research study.

Thank you.
APPENDIX E

Screening Tool

Thank you for expressing your interest in participating in the study that will explore the impact of ADHD on physical therapy students who have completed acute care clinical education experiences. Before you may choose to enroll in the study, I will need to be determined whether or not you meet the criteria for inclusion in the study. This will be done by having you answer a few simple questions. Would you like to proceed with the questions? If so, PI will proceed with screening. If not, PI will thank the student for contacting the PI and the communication will be terminated.

1) Are > or = 18 y/o?
   a) Yes
   b) No

2) Have you been formally diagnosed with ADHD by a qualified health care practitioner?
   a) Yes
   b) No

3) Have you, alone, diagnosed your ADHD (e.g. you have not seen a health care practitioner qualified to make an ADHD diagnosis)?
   a) Yes
   b) No

4) Are you currently or were you previously enrolled in an accredited physical therapy program within the United States of America?
   a) Yes
   b) No

5) Did you complete an acute care clinical education experience during your enrollment in an accredited physical therapy program within the United States of America?
   a) Yes
   b) No

6) Did you reveal your ADHD diagnosis to the clinical site prior to the start of your clinical education experience?
   a) Yes
   b) No

7) Did you reveal your ADHD diagnosis to the clinical instructor prior to the start of your clinical education experience?
   a) Yes
   b) No
APPENDIX E (continued)

Upon completion of the screening, the PI will assess the answers provided by the student to ensure that the student has met the inclusion criteria for the study (i.e. responses must match bolded answers above).

If the student meets the inclusion criteria for the study, then they will be informed that they are eligible to participate in the study. The student will then be asked if they would like to proceed or not. If so, the student will be asked to provide the PI with their name, phone number, and email address in order to receive additional study materials. If not, the PI will then thank the student for contacting the PI and the communication will be terminated.

If the student does not meet inclusion criteria for the study, then they will be informed that they are not eligible to participate in the study. The PI will then thank the student for contacting the PI and the communication will be terminated.
APPENDIX F

Demographic Data Survey

1) What is your age?
   a) <18
   b) 18 - 25
   c) 26 - 35
   d) 36 - 45
   e) 45+

2) Sex:
   a) MALE
   b) FEMALE

3) Have you been formally diagnosed with ADHD?
   a) Yes, and I currently take medication for it.
   b) Yes, and I do not currently take medication for it.
   c) No

4) At what age were you diagnosed with ADHD? ________________

5) What type of ADHD have you been diagnosed with?
   a) Inattentive
   b) Hyperactive – Impulsive
   c) Combination

6) Have you ever used support services offered by your college or university to help manage your ADHD?
   a) Yes
   b) No

7) If yes, did you use those support services during your clinical education experiences?
   a) Yes
   b) No

8) Have you ever been diagnosed with any disorders other than ADHD (e.g. mood, anxiety, behavior, or conduct)?
   a) Yes
   b) No

9) Have you completed an acute care clinical education experience?
   a) Yes
   b) No
10) Which clinical education (CE) number was your acute care placement (e.g. CE I, CE II, etc.)?
   a) I
   b) II
   c) III
   d) IIII
   e) IV

11) Did you reveal your ADHD diagnosis to the clinical site before the start of your acute care clinical education experience?
   a) Yes
   b) No

12) Did you reveal your ADHD diagnosis to the clinical instructor before the start of your acute care clinical education experience?
   a) Yes
   b) No

13) At the time you completed your acute care clinical education experience were enrolled in an accredited Physical Therapy Education program within the United States of America?
   a) Yes
   b) No

14) Actual or anticipated physical therapy program graduation month and year?
   a) Month 
   b) Year 

APPENDIX G

Semi-Structured Interview Protocol

Hello, my name is Cori Zook-Arquines. I will be conducting your interview today. The purpose of today’s interview is to explore how student physical therapists with attention-deficit/hyperactivity disorder (ADHD) experience the transition from student to clinician in the acute care setting. I will ask a series of questions about ADHD and how it affected your experience during your acute care clinical. For reference during your interview, you will receive a copy of the American Physical Therapy Association Physical Therapy Clinical Performance Instrument and the Physical Therapy Patient Client Management Model. The interview will be audio recorded and I will take notes during the interview. The entire interview should take approximately 60 minutes. It is your right to refuse to answer any question that makes you feel significantly uncomfortable. Upon completion of the interview transcription you will be contacted to review and comment on the accuracy of the transcription if you choose to do so. Review of the accuracy of the transcription is encouraged, but not required. Once your feedback has been received, it will be reviewed. Modifications to the transcription will be addressed as needed.

At this point, I need to obtain your consent to participate in the study. These are the informed consent documents. Please review.

Do you have any questions before we begin?

Interview Questions

1) Please, tell me about how you experience ADHD?
   a) What are the positives of having ADHD?
   b) What were the negatives of having ADHD?

2) How did you experience the transition from physical therapy student to clinician in the acute care setting?
   a) What do you think were the unique challenges of the acute care setting?
   b) What kinds of problems did you experience early in the acute care clinical?
   c) How did these problems change over time?
   d) What did you do to overcome the problems?
   e) What kind of assistance, if any, did you need to overcome the problems experienced?
   f) How, if at all, did having ADHD affect your ability to adjust to the acute care environment?

3) How, if at all, did having ADHD affect your ability to function within your role as a physical therapist in the acute care environment?
   a) How, if at all, did ADHD affect your ability to manage patients?
      i) To perform an examination (history, systems review, tests and measures)?
      ii) To complete an evaluation or make clinical judgments?
      iii) To identify a physical therapy diagnosis?
iv) To establish a physical therapy prognosis (predicted level of improvement, treatment goals, expected outcomes, duration and frequency of treatment, interventions to be used)?
v) To complete your physical therapy interventions (coordination, communication, documentation, patient/client related instruction, procedural interventions)?
vi) Was there an impact on your physical therapy outcomes?

4) How, if at all, did having ADHD affect your learning?
   a) Were there specific facilitators to your learning? If so, what?
   b) Were there specific barriers to learning? If so, what?
   c) What, if anything, did you do to facilitate your learning?
   d) What, if anything, did others do to facilitate your learning?
   e) What did you need, if anything, from your clinical instructor or others to facilitate learning?

5) Which criteria of the PT Clinical Performance Instrument were most affected your ADHD symptoms?
   a) Why were they affected?
   b) How were they affected?

6) What are your thoughts on withholding your ADHD diagnosis?
   a) What was your rationale for not informing your clinical site or instructor of the diagnosis prior to your arrival?
   b) What were your concerns about revealing their ADHD diagnosis to their acute care clinical education sites and to their clinical instructors?

7) Did you reveal your ADHD diagnosis at any point during your clinical?
   a) If so, when did you reveal it?
      i) Why did you reveal it?
   b) If not, why not?

8) How did your clinical instructors react to you before knowing the diagnosis?
   a) After knowing the diagnosis?
   b) Did the reactions of your clinical instructor(s) help or hinder your adjustment to the acute care clinical education setting?

9) What kind of feedback, formal or informal, did you receive from your clinical instructor(s) regarding your ADHD?
   a) Did the feedback help or hinder your performance?
      i) How did it help or hinder your performance?

10) How did your clinical instructors evaluate your APTA Clinical Performance Instrument at midterm?
    a) At final?
    b) How did you feel about the evaluation you received from your clinical instructor(s)?
    c) How, if at all, were the ratings between you and your clinical instructors the same or different?
APPENDIX G (continued)

11) How did ADHD affect your quality of life outside of your clinical experiences?
   a) Social life?
   b) Relationships?
   c) Psychological well-being and functioning (e.g. any symptoms depression, anxiety, stress, self-regulation of emotions, self-esteem, confidence)?
   d) Physical health?
   e) Other?
   f) How did you manage the quality of your life during their clinical experiences?
   g) How, if at all, did any issues relating to your quality of life affect your clinical education experience?

12) How do you feel about your overall acute care clinical education experiences?

13) What, if anything, did you learn about yourself from your experience?

14) What, if anything, did you learn about ADHD from your experiences?

15) What advice do you have to offer to clinical educators?

16) What advice do you have to offer other physical therapy students with ADHD?

17) Is there any other information you would like to share?

As mentioned earlier, you will be contacted in the upcoming months to review and comment on the accuracy of the interview transcripts and the interpretation of the data. In the meantime, if you would like information about your universities’ Disability Resource Center or Offices of Access and Equity I will be happy to provide it to you now. If you would like this information at a later date, please feel free to contact me at (630) 532-9168 or CZAMHPE@gmail.com. I want to thank you for your time and I appreciate your participation in the study.
VITA

NAME: Cori Ann Zook-Arquines

EDUCATION: B.S., Physical Therapy, University of Illinois at Chicago, Chicago, Illinois, 2001
B.A., Psychology, University of Illinois at Chicago, Chicago, Illinois, 2001

TEACHING: Department of Physical Therapy, Midwestern University, Downers Grove, IL; General and clinical education for Doctor of Physical Therapy students, 2014 –
Department of Rehabilitation Services, University of Illinois Hospital & Health Sciences System, Chicago, IL; Physical Therapist Clinical Instructor for physical therapy students, 2001 – 2014
Department of Physical Therapy, College of Applied Health Sciences, University of Illinois at Chicago, Chicago, IL; Pathophysiology lecturer for Doctor of Physical Therapy students

HONORS: Outstanding Clinical Instructor (1), Chicago Area Clinical Educators Forum, 05/12
Outstanding Clinical Instructor (2), Chicago Area Clinical Educators Forum, 05/12
Clinical Educator of the Year, Illinois Physical Therapy Association, 04/10
Outstanding Clinical Instructor, Chicago Area Clinical Educators Forum, 05/09

PROFESSIONAL MEMBERSHIP
Chicago Area Clinical Educators Forum, Secretary
Chicago Area Clinical Educators Forum, Member
American Physical Therapy Association, Member
Section Memberships: Acute Care, Education, Cardiopulmonary, Health Policy and Administration
Illinois Physical Therapy Association, Member