

An Examination of the Effects of ADHD Coaching on University Students' Executive Functioning

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Abstract

Seven undergraduates at a selective Midwestern university participated in a semester-long pilot study regarding the impact of ADHD coaching services on their academic experiences. Coaches in the study had extensive qualifications, including specific training to address the needs of college students with ADHD. Three major themes emerged from qualitative interviews conducted with participants. First, students reported that their goal attainment skills improved by working with their coaches. In addition, students stated that they enjoyed working with coaches, whom they found to be effective and supportive. Finally, coaching helped students achieve a greater sense of well-being and self-regulation. These findings from thematic analysis of interviews are supported by quantitative data including administration of the Learning and Study Strategies Inventory (LASSI), which resulted in a substantial mean gain pre/post in self-regulation, and analysis of students' grade point average data. It appears that coaching holds promise as an emerging type of academic support for college students with ADHD to promote improved executive functioning.

Institutions of higher education provide a range of services today to growing numbers of students with Attention-Deficit/Hyperactivity Disorder (ADHD). In 2004, Harbour reported that students with this diagnosis had become the second largest subgroup of students receiving accommodations through Disability Services (DS) offices after students with Learning Disabilities (LD). Additional sources have reported a rapid rise in the numbers of postsecondary students with ADHD over the past decade (Quinn, Ratey, & Maitland, 2004; Wolf, 2001). Several factors help explain this trend. In 1991, the Department of Education formally recognized ADHD as a handicapping condition that could trigger Special Education services under the "Other Health Impairment" (OHI) category. The number of students served as OHI, including high school students with ADHD who received transition services, quadrupled by 2000 (Horn & Tynan, 2001). By the mid-1990s, a wave of literature (e.g., Hallowell & Ratey, 1995) reported the new understanding that ADHD symptoms persisted into adulthood. Then-conventional wisdom that most children outgrew impairment from this disorder gave way to the recognition that adults

with ADHD often needed disability-related assistance, too (Ingram, Hechtman, & Morgenstern, 1999).

Such findings have contributed to a rise in the diagnosis and treatment of adults with ADHD, including college students (Parker & Benedict, 2002). Campus professionals have sought to understand the nature of ADHD in order to provide the most appropriate support services for this emerging group of students (Quinn & McCormick, 1998). Undergraduates with ADHD are often at risk for becoming overwhelmed by new academic and organizational demands as they transition to postsecondary campuses, which provide substantially less external structure compared to high school and home settings (Katz, 1998; Wolf, 2001). Weyandt and DuPaul (2006) reported that college students with ADHD were at greater risk for academic difficulties and psychological distress compared to students without disabilities. These transition phenomena can limit students' ability to persist to graduation without effective academic assistance for attentional impairments.

Recent research has replaced an earlier behavioral view of ADHD with a neurocognitive framework. Today, ADHD is widely viewed as a disorder of executive

functioning skills. Executive functioning is an umbrella construct reflecting self-regulatory mechanisms that organize, direct, and manage other cognitive activities, emotional responses, and overt behaviors (Gioia, Isquith, & Guy 2001). Brown (2005) described six executive functions, including activation (organizing and starting one's work), focus (sustaining or shifting one's attention), effort (regulating alertness and adjusting processing speed), emotions (managing frustrations and modulating intense emotions), memory (retrieving, holding, or working with information), and action (monitoring and regulation of effort). The paradigm shift away from a behavioral view of ADHD to one of underlying executive functioning impairments has altered recommendations for practice. Whereas past interventions primarily involved pharmacology and behavior management, the literature now endorses pharmacology coupled with services that help individuals with ADHD enhance their self-management skills (e.g., organization, time management, and emotional self-regulation) (DuPaul, Weyandt, O'Dell, & Varejao, 2009; Silver, 2010). Findings from a recent National Institute of Mental Health (2007) conference underscore the importance of identifying effective ways to assist students with executive functioning impairments as they transition to adulthood:

Despite the short-term effectiveness of current treatments for ADHD, particularly stimulant treatments, the limitations of these treatments for long-term outcomes are increasingly recognized. Among these limitations are failures to achieve long-term gains in academic achievement (e.g., elevated high school dropout rates) and limited vocational opportunities and success (e.g., frequent job changes, greater unemployment). The persistence of deficits in executive functions, motivational deficits, and impairments in self-regulation are increasingly acknowledged.

Non-pharmacological strategies that help adults with ADHD improve their executive functioning have received particular attention in the best practices literature (Wedlake, 2002; Wolf, 2001). Increasing numbers of campuses have investigated ADHD coaching, an emerging service delivery model that appears to provide this type of assistance (Parker & Boutelle, 2009; Quinn et al., 2000; Schwartz, Prevatt, & Proctor, 2005). Developed as a private practice model, coaches

use specific types of questions to model effective executive functioning and to elicit students' own ideas as they increase their capacity to clarify, plan, and take action on goals. This approach, with a greater emphasis on asking rather than telling, has been identified as an "inquiry" model (Parker & Boutelle, 2009; Whitworth, Kimsey-House, Kimsey-House, & Sandahl, 2007). Coaches' questions promote students' ability to stop, reflect, and develop more realistic plans, based on more accurate self-awareness of how they think and act. Coaches then hold clients accountable for taking action on these plans and learning, in the process, about factors that support or restrict their goal attainment (Quinn et al., 2000).

Coaching's inquiry approach contrasts with didactic models of academic services commonly provided to college students with and without disabilities, such as content tutoring or strategy instruction (Byron & Parker, 2002). Tutors and strategy instructors verbally describe and demonstrate how to solve problems, carry out pre-determined steps in a learning strategy, or organize one's thinking about an academic task. Instead of telling students how to color-code a monthly calendar system, conversely, coaches would ask students questions such as, "What's important for you to remember as you go through your week?" and "What would be helpful for you to see or be reminded of as the week unfolds?" A dialogue of this nature might lead to the student selecting time management software that sends text messages to his/her cell phones with 'real time' reminders the student had previously programmed. Coaches often provide brief phone calls, e-mails or text messages to ask students about their progress as they begin to develop new habits for following through on their plans (Quinn et al., 2000). This method has helped college students with ADHD and/or LD attain academic goals in more self-determined ways while also reducing their non-clinical levels of daily anxiety and stress (Parker & Boutelle, 2009; Zwart & Kallemeyn, 2001).

A small but growing body of research on college ADD coaching reflects the increasing interest campuses have expressed in this new form of academic support (Byron & Parker, 2002). Goldstein (2005) called for additional research to measure coaching's efficacy and to identify unique components of this emerging model. DuPaul et al. (2009) recommended research about non-pharmacological treatments involving college students with ADHD, given the siz-

able percentage of individuals who do not respond to medication. This issue is especially important due to the growing reports of the abuse of stimulation medication on college campuses (Tudisco, 2010). Frazier, Youngstrom, Glutting, and Watkins (2007) specifically recommended empirical investigations of coaching's ability to help college students with ADHD minimize the impact of executive functioning impairments on their academic achievement. All people have and use executive functioning skills. The transition to rigorous postsecondary settings can trigger new challenges to how students plan, organize, and guide their own behavior in pursuit of their academic goals. Greater insights about the efficacy of coaching may yield helpful knowledge that pertains to the needs of a wide range of postsecondary students, including but not limited to those with identified executive functioning disorders.

Research Questions

Within the context of what is known about college students with ADHD and emerging knowledge about ADD coaching, this study explored three research questions. First, what are students' perceptions about the effect of coaching on their process for achieving academic goals? Second, what benefits do students associate with the coaching services provided in this study? Third, did students' work with coaches on academic success issues affect their sense of well-being?

Methods

Given these questions, the authors conducted a small pilot study at a private Midwestern university during one semester. This research was primarily qualitative in nature and carried out in preparation for a larger field test of ADD college coaching. All freshmen, sophomores, and juniors enrolled full-time during the spring term who were eligible for accommodations based on approved ADHD documentation from the university's Disability Services office, but who had no other diagnosed disabilities, were invited to participate. This pool totaled approximately 25 students. Potential participants were informed that the researchers were investigating the impact of ADD coaching on their academic experiences.

Participants

A total of ten students initially expressed interest in this research. After learning more about the study, eight of these students provided their informed consent

to participate according to Institutional Review Board procedures. Initially, two females completed consent forms but one of them did not follow up to initiate services with her coach, leaving just one female participant. Participants completed a demographic data form at the launch of the study. Two freshmen, two sophomores, and three juniors participated (see Table 1). Interestingly, these participants were experiencing relatively high levels of academic success as measured by their grades at the study's outset. Consistent with rigorous admissions standards of the university, their mean cumulative Grade Point Average (GPA) at the beginning of the semester was 3.18.

Students' names have been replaced with pseudonyms. Alex was a freshman from a large city on the East Coast. He began the study with a 3.48 prior semester GPA and ended it with a 3.68 GPA. He was quiet but observed others with a low-keyed intensity. Alex often paused at length before speaking, as if gathering his thoughts, before answering questions in a highly parsimonious manner. Steve, another freshman, was from the South. He began the study with a prior semester GPA of 4.0 and maintained this during the study. He had requested a meeting with the Disability Services office two months before the study to understand his disability better and to learn new ways to manage its impact. Quiet and shy, yet extremely intelligent, Steve also appeared reserved in conversation. Joe was a sophomore from the East Coast. He began the study with a prior semester GPA of 3.60, which dropped slightly to a 3.12 by the end of the spring semester. Although diagnosed with ADHD in middle school, Joe found little need for academic assistance through high school and only sought college accommodations mid-way through his third semester. Serious and garrulous in conversation, Joe's comments reflected a hardworking and often solitary life due to his need to study a great deal. In contrast, Olivia was a sophomore from the Midwest with an effervescent personality. She was heavily involved in campus activities, including her sorority. Olivia exuded a positive energy and talked in a rapid, animated fashion. She laughed a great deal while describing her busy university life. Olivia began the study with a prior semester GPA of 2.88 and ended it with a 3.38.

Rob was a tall, lanky junior from the South. Gentlemanly in manner, he spoke with a calm, affable manner that could belie the seriousness of his reflections. He had used accommodations throughout

Table 1

Participants' Artifacts




<u>Student</u>	<u>Year</u>	<u>Artifact</u>	<u>Student Quote about Artifact</u>
Alex	Freshman	 <p>Portable water bottle</p>	<p>“[Coaching] was a resource to pour my thoughts into, and my feelings about things. And then it was kind of a resource to take from what I felt I needed. And it was helpful.”</p>
Steve	Freshman	 <p>Steamboat Springs, CO ski slope map</p>	<p>“My dad and I went skiing. We would find ourselves here or here. And we were like, ‘Gosh, we’d really like to get here. How can we do that?’”</p>
Joe	Sophomore	Did not bring an artifact	
Olivia	Sophomore	 <p>Photograph of her clean room (on her cell phone)</p>	<p>“One day before Spring Break, maybe a week or so before? I had a free day and it was right after [my coach] and I had talked and we had gone through all the different ways I could reorganize things to have more space, to put things that were cluttering everything up in spaces.”</p>

Table 1 continued on next page

Rob Junior



“The glue represents a tool that [my coach] helped pull out of me to keep myself together.

A bottle of glue used in course projects

Tim Junior



“[My coach] told me that one thing that some people do is, they have a little artifact that they can kind of throw across the room. A physical thing to represent all the unhelpful, negative thoughts that they have and to do something with that.”

Small wooden carving of a man's face

Zach Junior



“[Coaching] gives a way to look at things so ideas can bud and flower... It's also a positive voice that you can keep in the back of your head that's like, 'I can do this and this is how I'm going to do this to keep on track.'”

Two shrub leaves; one is brittle, the other is verdant

his college career but found it increasingly difficult to complete long-term projects in his major. Rob began the study with a prior semester GPA of 3.60 and ended it with a 3.68. Tim was a junior who had returned to the university after taking a year off to address a range of personal issues. He appeared restless and was apt to lose his train of thought while talking. His grades dropped during the study, shifting from a 1.79 prior semester GPA to a 1.70. Unable to complete two Incompletes the summer after the study, Tim lost his academic eligibility to return to the University. Zach was also a junior. Small and wiry, his mop of long, dark hair and tendency to wear hiking clothes conveyed his counter-culture values. He enjoyed outdoor activities such as canoeing and played bongo drums. Zach had experienced a great deal of academic difficulty during his sophomore year. He became more accepting of his ADHD and started thinking a great deal about new strategies while on a study abroad field experience the summer before his junior year. Like most participants, Zach's grades improved during the study. His prior semester GPA of 2.0 climbed to a 3.1.

Having worked hard to earn impressive grades in most cases, these participants expressed two related reasons for volunteering: to increase their academic efficiency through better self-awareness and skill proficiency and to enhance their quality of life in a rigorous postsecondary environment. Steve noted on his demographic data form, "I want to work with an ADD coach to better understand my ADD condition and to gain valuable tools to manage ADD so that I might mitigate the impact of ADD on my life as a whole." Olivia decided to participate to "hone my skills and discover ways to become a more effective student in terms of organization and study discipline." Rob hoped that participation could help him "get a more balanced life – ease stress with schoolwork and work more efficiently."

Coaching Intervention

All coaches in this study worked for the Edge Foundation (www.edgefoundation.org) and shared backgrounds of comparable training and extensive experience coaching students with ADHD. Edge coaches are required to complete a specialized training program that focuses on high school and college students with ADHD. Prior to registering for this training program, Edge coaches must have at least 60 hours of coaching training required for accreditation from appropriate

organizations such as the International Coach Foundation or the Institute for the Advancement of AD/HD Coaching. They also need a minimum of two years of experience as a coach with at least 10 clients. Edge coaches are contracted by the Edge Foundation rather than being its employees.

Implementation of the Edge coaching model begins with a two-hour intake session between the coach and student over the phone, in which the coach gets to know the student, learns about his/her strengths and weaknesses, and elicits feedback about the student's goals and preferences for interacting with the coach. After the intake, Edge coaching involves weekly, pre-scheduled phone calls between a coach and student lasting approximately 30 minutes. Coaches and students also exchange brief e-mail messages, text messages, or follow-up phone calls between weekly coaching sessions as needed. These interactions often involve the student reporting on his/her progress, the coach asking how a particular plan unfolded, or the sharing of an affirming message or information by the coach that may be of interest to the student.

ADD coaches typically address goals closely linked to students' executive functioning skills. Edge coaches in particular work with students in seven major areas: scheduling, goal setting, confidence building, organizing, focusing, prioritizing, and persisting at tasks. They help students assess their environments, identify needs, set goals, and offer suggestions and guidance. Coaches also set structures, provide support, and help students implement strategies for skill building. They monitor student progress and goals through their regular phone or e-mail check ins (www.edgefoundation.org/parents/how-a-coach-helps).

Data Collection

Participation involved provision of information and utilization of weekly coaching sessions throughout the semester. One of the authors collected students' self-reported demographic data and their semester and cumulative GPA and academic credits from university records. All participants completed the online *Learning and Study Strategies Inventory, 2nd edition* ([LASSI]; Weinstein & Palmer, 2002) at the beginning and end of the semester. The LASSI is an "80-item assessment of students' awareness about and use of learning and study strategies related to skill, will and self-regulation components of strategic learning" (www.hhpublishing.com/_assessments/LASSI/index.html). Results address 10 scale areas (skills such

as Time Management; beliefs such as Attitude) that are averaged into three cluster scores: Skill, Will, and Self-Regulation. All scores are reported as percentiles. As this study was primarily qualitative in nature, students' LASSI scores and GPA data were used to triangulate findings from interviews with participants.

Data Analysis

Due to the nature of this pilot study, which centered on formative evaluation, and the small sample size, hypothesis testing is not appropriate. Nevertheless, an examination of the mean scores for the three LASSI clusters (Skill, Will, and Self-Regulation) demonstrated increasing trends for all three clusters. This provided evidence that the coaching intervention was successful in increasing key beliefs and skills related to academic success, including executive functioning in university students with ADHD.

Students agreed to participate in a one-hour qualitative interview with the first author on campus during the end of the semester. See Figure 1 for the interview protocol. These one-on-one qualitative interviews took place approximately 10 weeks into the semester. They were audio recorded, transcribed, and analyzed to identify emergent themes. Students were asked to bring an artifact to their interview (see Table 2). Artifacts were described as "any object you make or find that represents what coaching means to you." Interviews began by reminding students of their stated reason for participating in the study, based on comments in their demographic data form. The artifacts were photographed and students' comments about them were also used to help triangulate interview data.

All interview transcripts were analyzed in depth by the two research team members who have received training as ADD coaches. Both team members listened to each interview and read the verbatim transcripts prior to the coding. The first author completed an initial round of coding of all transcripts (Charmaz, 2001; Denzin & Lincoln, 1994). Separately, another research team member then applied these codes to extensive excerpts from three transcripts. A high degree of inter-rater reliability was reached through iterative discussions about the application of codes to all cases. These team members then triangulated the emergent themes by comparing their findings to students' artifacts, GPA data, LASSI scores, and students' reasons for seeking coaching services (Hoepfl, 1997). This led to the creation of a cross-case display of example data

points from a variety of students in response to each research question (Miles & Huberman, 1994). All four research team members then reviewed the cross-case display to finalize results by linking emergent themes to the research questions. By moving from isolated examples of students' thoughts, feelings, or activities in their coaching relationship to broader explanations of how coaching promoted their executive functioning skills and sense of well-being, the research team used a "bottom up" approach to construct meaning from the data (Miles & Huberman, 1994).

Results

Enhanced Goal Attainment

The first research question investigated the impact of coaching on students' academic goal attainment process. Although three students stated that coaching did not influence their goals, most participants reported that coaching changed how they formulated their goals and improved their capacity to attain them. These students noted that coaching helped them set higher academic standards and establish goals that were much more specific, broken into component steps, and linked to incremental deadlines.

Olivia did not believe that coaching changed her tendency to set goals. She asserted, "I never really had a problem establishing goals before so I don't really think that was an issue." Conversely, Joe described a change also reported by other students when describing coaching's influence on how he established goals:

I'm setting higher standards [now]. I'm trying to reset higher standards for myself because, coming into college, my expectations were, "Oh yeah, hey; 3.6, 3.7 [GPA], no big deal because, just coming from high school, that's just the way everything worked." So resetting those higher standards has been something I have been talking to [my coach] about.

Once students had academic goals in mind, the majority believed that coaching helped them act on their goals with more effective strategies and greater motivation. Several students described new time management techniques they developed with their coach, for example, that enhanced their ability to monitor progress toward these goals across time. Two students developed new habits of writing down or visualizing outcomes that helped them remember

Table 2

Qualitative Interview Protocol

Research Question 1: What are students' perceptions about the effect of coaching on their process for achieving academic success?

Prompts:

- Since you started working with a coach, have you noticed any changes in how you identify or create your academic goals?
- Has your coach helped you change anything about how you work towards your academic goals? If I were to ask someone who knows you very well and interacts with you a lot if coaching has changed anything about you, what would they say?
- If not mentioned by students, follow up with this prompt: "Self-talk" is when you hear your own voice or someone else's voice when you're thinking about what you have to do. Has coaching changed anything about your self-talk?

Research Question 2: What benefits, if any, do you associate with coaching services?

Prompts:

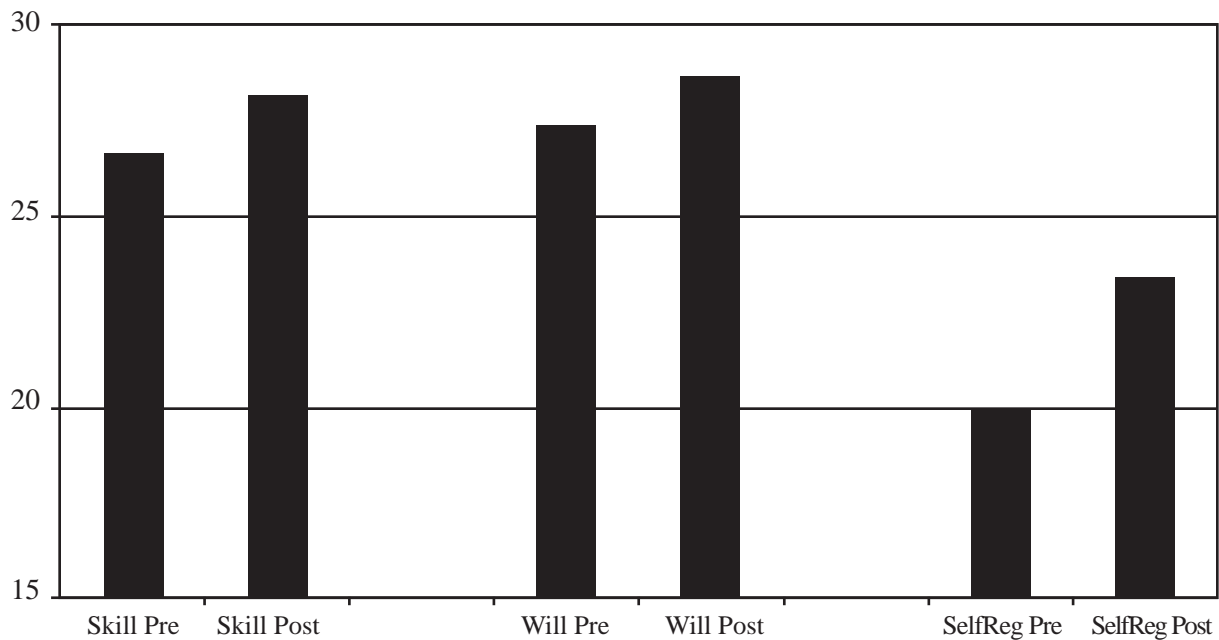
- What's the most useful outcome of working with your coach?
- If another college student asked you to describe what you liked about working with a coach, what would you say?
- Has coaching helped you achieve better grades? Or achieve those grades in a better way?
- Besides grades, can you identify any other benefits of working with a coach?

Research Question 3: What do students perceive as the relationship between coaching, their academic success, and their subjective well-being?

Prompts:

- Is your work with a coach having any impact on the stress you feel about being in college?
- Fill in the blank: "Working with a coach helps me feel ____." Please say more about that.

Figure 1. Pre- and Post-Test Cluster Scores on LASSI



Due to the nature of the pilot study, which centers on formative evaluation, and the small sample size, hypothesis testing is not appropriate. Nevertheless, the chart above demonstrates the increasing trends for all three clusters: Skill, Will, and Self-Regulation. This provides evidence that the coaching intervention was successful in increasing key beliefs and skills (including executive functioning) in university students with ADHD.

goals and maintain motivation for reaching them. Despite their overall high levels of academic success, these freshmen, sophomores, and juniors all found it difficult to break large deadlines into smaller chunks of activity. In many cases, coaching helped students develop new approaches to reframing their goals as a series of steps. Steve brought a map of the ski runs in Steamboat Springs, Colorado as his artifact. He and his father had recently skied there during spring break. When asked to describe how this map symbolized his experiences with coaching, Steve said:

My dad and I went skiing. We would find ourselves here or here [pointing to slopes on the map]. And we were like, “Gosh, we’d really like to get here. How can we do that?” It’s like, “Oh, left here, right here, lunch, here, here, here. A to B to C to D. Then we can really take that run we want to take!” Interviewer: What about that makes you think of coaching?

Well, I’m kind of being redundant here, but the whole goal-setting/oriented thing. Like, “Here’s what you want to do. How is it that you can accomplish that?” I guess if I had a roadmap, that would be an even better example, but ski lifts are more fun.

Olivia’s coach helped her develop time management skills that facilitated her ability to work across time on large projects. This incremental approach contrasted with her earlier pattern that often included significant procrastination. Olivia reported:

[Before coaching] I would be really sleep deprived, cram it all in and get the grades I needed, but I just never felt like I had time. And everything was always urgent; last minute. And so [my coach] has taught me to – we have a Google calendar and she has access to it, too. And I put all my classes and meetings and everything into it and in my free time allocate, working out or going grocery shopping

or study times. I have repeated study times every week... It's more the way learning is supposed to be [laughs] – gradual, doing things before they become urgent.

Rob was a visual thinker who could easily envision the buildings he wanted to design, but his ADHD challenged his capacity to carry out the steps needed to implement these ideas. The space in which Rob lived and worked often became disorganized, too. Much of this changed during the study. Rob's roommate was overseas in a study abroad program during the study. He commented that the roommate would have been pleased by how much neater their room had become. After nearly three months of coaching, Rob reported with a smile that his professors had also notice positive changes:

Yeah, mainly with my work being done in my architecture studio. People have commented that, "Wow, you're really producing this semester," or, "Wow – you're," I don't want to brag, but – "further ahead than everyone else," or whatever. Just small comments like that that you occasionally hear that I might not have heard last semester.

Similar to Rob and most of the other participants, Joe began to notice that his internal state of mind while being coached produced positive changes in his goal-attainment efforts. When asked if coaching had changed anything about him, Joe thought for a moment before saying:

I'm more prompt. I hold my commitments better. Which is something I did before [coaching], but something I just realized is more and more important. My room's a little more organized. I think more of what coaching has given me is an internal awareness and internal focus on what it is I need to do to improve a very specific aspect of my life that not everyone always sees. It's more of a fine-focused knob type of thing.

While most students attributed their high grades to their own talents and efforts, nearly all credited coaching with improvements in *how* they achieved those grades. Participants talked about becoming more consistent in their work habits, using new techniques for test-taking and reading comprehension they had

developed with their coach, starting earlier as they began to study for exams, and studying more consistently over time. This finding merits further investigation since four of the seven students' grades did, indeed, improve while being coached. One remained the same (4.0) and two declined slightly. When asked if coaching led to better grades, Olivia quickly said, "I actually don't think so. Grades were never really an issue for me ever." Alex was more forthright in expressing an opinion shared by most of the students. "No," he said, "but, again, I wasn't doing it for academic reasons." That said, Olivia's semester GPA rose from 2.88 to 3.38 during the study and Alex's increased from 3.48 to 3.68.

Zach is the only student who directly linked coaching to his GPA. He felt strongly that coaching helped him earn better grades, which was confirmed as his GPA climbed from a 2.0 to a 3.01 during the study. As he said:

Yeah, I've seen my grades go up. For example, I started coaching after my first exam in Biology. And I was talking to my coach. We were recognizing some of the issues I was having studying for the last test, making sure that I was putting in enough time to study. And then, also, checking in to make sure that I was actually doing what I said I was going to do as far as studying goes for the test. And on the second exam, I went from – I actually failed the first exam. Luckily, I could drop one. But on the second one, I got above the class curve... It felt good, like, "I can actually do this."

Caring, Accountable Relationships

The second research question explored benefits that students associated with coaching services. Overall, they reported that a productive relationship with their coach helped them feel motivated to achieve or maintain academic success in a demanding postsecondary environment. Students appreciated their coaches' ability to challenge them to achieve meaningful goals. At the same time, they enjoyed working with coaches who clearly understood them, recognized the impact of their ADHD on their lives without becoming critical of them, and cared about their feelings and experiences. Participants reported that a working relationship with these coaches allowed them to become more proficient and confident.

To explore this research question, students were asked to identify the most useful outcome they could

attribute to coaching. Their comments overwhelmingly focused on helpful dynamics in their relationship with a caring coach. Some students spoke to qualities in the coach, such as being a skilled facilitator of the student's planning process, tailoring suggestions to that student's needs or preferences, holding students accountable in a respectful but consistent manner, or demonstrating an accurate awareness about ADHD. Other comments reflected what students gained from the coaching relationship, including greater accountability to themselves, new strategies for accomplishing goals and living more balanced lives, enhanced self-awareness, and increased confidence about achieving their goals.

While all the participants respected their coach's professional skills, nearly all of them also described their coaches as genuinely caring people. Joe spoke at length about how often his coach helped him generate and sustain a sense of optimism as he moved through his demanding week. Like Tim, Joe often looked down at the floor while talking, rarely laughed, and described few experiences in which he felt happy. His goal attainment was clearly enhanced, however, from the relatedness he enjoyed with his coach:

When I work with an Edge coach, I feel like it's a step in the right direction personally, emotionally. Because a lot of the setbacks that I've had, I can at least make myself feel better in that I am giving it effort. I'm giving it my all... I think that the Edge coaching reminds me of that a lot; that I'm really trying to do something about it. It's also giving me someone to talk to who specifically knows these things... When I first started talking to [my coach], she summed me up pretty well and it seemed like she understood where I was coming from. And that's not really common... I feel that she has helped me move to a more comfortable state of mind.

Students were asked to discuss what they liked best about working with a coach. Here, their comments centered on coaches' skill and empathy. Students developed strong working relationships via weekly calls despite never meeting their coach in person. They appreciated the coaches' knowledge about ADHD and their expertise in motivating them and helping them manage stress. Students described coaches as focused on their priorities and adaptive to their thinking styles and personalities. Alex, the circumspect freshman,

was relatively expressive when describing what he liked best about working with his coach. He reported that she was "very flexible and open and had pretty good insights. She was also willing to talk about what I thought was most important and didn't adhere to any strict scheme or anything. So she was very good." He added an appreciation for his coach's ability to inform her insights about his experiences with expert knowledge:

Sometimes I would describe something and she had information about how it was typical of the ADD brain and how this kind of thing that I was experiencing is not really stereotypical of ADD, but was typical of people who had ADD. And shared some techniques she had used with people in the past.

Rob, the junior who majored in an arts-related field, was even more explicit in describing the depth of relatedness he felt with a caring coach. He reported that her support of his efforts enhanced his motivation throughout the week. When asked what he liked best about coaching, Rob leaned into the conversation and stated with quiet conviction:

Besides the benefits, I think the relationship. Developing a relationship is very helpful in keeping you; it's almost like developing a relationship with an angel on your shoulder or something. It's just kind of nice to have a good relationship with someone that can help you.

Interviewer: What do angels on your shoulder do?
[Laughter]: They keep you upbeat when it would be very easy to crash and burn.

Steve particularly enjoyed his coach's ability to relate to his ADHD by describing strategies that worked for other college students with this disorder. The coach offered strategies to Steve for his consideration without conveying an expectation that Steve had to utilize them. As a freshman, Steve had not yet met many other college students with ADHD. He, too, appreciated working with someone who seemed to know him well:

I would say [to my coach], "Look, I'm having this problem, right?" Or we'd be, like, "Here's a goal. Why aren't I reaching that goal?" "Oh, it's because of this problem." And then he would say, "Well,

some people like yourself with ADD, they would try x, y, and z.” And I’m like,” Wow, that’s really helpful to know what other people kind of like me in similar situations are doing and how they solve their similar problems.”

Like many other participants, Olivia and Steve enjoyed being accountable to their coach. Coaches held students accountable by reminding them of their goals and asking students for honest accounts of their goal-directed efforts or lack thereof. Rather than creating a negative wedge in the caring relationships they built with their coaches, students said that being held accountable helped them progress and demonstrated their coaches’ commitment to their success. Olivia had achieved academic success as a sophomore but often felt stressed out due to the many obligations in her socially active life. Being accountable to her coach helped Olivia strike a more manageable balance between commitments to others and to her own goals and needs:

I would say I am holding myself much more accountable for my actions and for the outcomes of my actions. I was never somebody who blamed everyone for problems, but now, if something needs to be done, nobody’s going to do that for me. I need to do it. I do what I want to do and I get it done and I maintain that. That actually helps. It’s an exponential effect that makes you want to be more organized in another area that keeps reinforcing your motivation to do other things.

Steve reported that his coach’s habit of holding him accountable appealed to his thinking style. Consequently, he began to internalize his coach’s accountability questions:

The next question I got used to hearing was, “Well, how do you think you might get to that? What steps do you need to take to do that? What’s effective? What’s not effective?” And [my coach] was really pretty analytical in going through those things. And while I consider myself to be an analytical person from the start, it’s entirely another thing to have someone sit down with you and force you to go through the methodology.

Even Tim, the junior who struggled with many emotional issues that complicated his ability to take

action on his goals, appreciated being held accountable. He acknowledged some difficulty in being honest with his coach. Nonetheless, he described her as non-judgmental as she sought to understand how he worked toward his goals. Tim said:

Working with an Edge coach helps me feel more that the tools I have around me can be a lot more simple than I make them. An Edge coach also makes me feel that I need a lot more therapy before I can start doing coaching and really be effective about it.

Enhanced Well-Being and Self-Control

Overall, students described a more positive sense of well-being that emerged from the increased self-regulation they achieved through coaching. As students realized that coaching helped them gain greater control over their goal-directed behaviors and minimize their daily stress, their confidence increased with their academic proficiency. This finding was reinforced by students’ LASSI scores (see Figure 1). Post-test scores on this measure of students’ study habits and beliefs showed gains in all areas. The area of greatest improvement was Self-Regulation, which measures students’ ability to employ their skills across time in order to accomplish their goals. There was an overall and positive trend in the participants’ GPA data as well. Participants’ average semester GPA at the beginning of the study was 3.05 and increased to 3.22 by the end of the study. While most students did not feel that coaching had a direct impact on their grades, this GPA trend suggests otherwise.

Participants described many ways that coaching helped them formulate and work toward goals in new ways, most of which were academic in nature. In addition, students observed that coaching improved their beliefs and feelings about their capacity to accomplish these goals. In general, students stated that they were becoming more self-regulated. They were more mindful of their goals and more likely to accomplish them in a timely, calmer manner. Several students described themselves as less likely to procrastinate; three students declared that they had become more organized. Students also noted that these positive changes were often noticed by others, including suitemates who appreciated more organized rooms, friends who sought help for achieving their own goals, and professors who complimented a student for his consistently improved studio work.

Olivia's artifact was a photograph on her cell phone. Although small and grainy, it was easy to see a very neatly-made bed next to an organized desk. With a broad grin that communicated a deep sense of satisfaction, Olivia explained that her bedroom was typically in disarray prior to coaching. This made it difficult to find study materials and left her with the feeling of being judged by her sorority sisters as highly disorganized. She identified a "neater room" as a goal when she began coaching. At first, the ideas she and her coach generated did not result in this accomplishment.

So, we tried for the first couple of weeks. [My coach] gave me ideas and it didn't really happen. And then one day before Spring Break, maybe a week or so before, I had a free day and it was right after we had talked. We had gone through and talked about all [the] different ways I could reorganize things to have more space, to put things that were cluttering everything up in spaces. And I now have all this empty storage space! And I have a lot of stuff, too, so that's a big deal [laughs]. And I just went through and spent a couple of hours doing this big overhaul. And then my coach talked with me about ways to maintain that. Like, actually changing lifestyle habits.

Like Olivia, Zach brought a very personal artifact to his interview. This junior, who had failed several classes prior to the study, described coaching as a service that positively impacted his ability to achieve academic success as well as his sense of well-being. He carefully unfolded a white tissue to remove two small branch tips that had come from the same shrub. One was brittle and pale; the other was pliant and lushly green. With a shy smile, Zach explained:

So I found a bush outside and part of it was dried out and yellow. This is just a stem from this bush with yellow leaves dried out and this one is definitely still alive. It's green, it's budding, and it looks like it's flowering. Coaching is like what water might do to this plant. Coaching gives confidence. It gives a way to look at things so ideas can bud and flower with that water and without that attitude and also goal-oriented advice. It's also like a positive voice that you can keep in the back of your head that's like, "I can do this and this is how I'm going to do this and stay on track." And

then this is what it does to your mind. It keeps your mind alive and it allows your ideas to bud and flower.

To explore the final research question, students were asked if coaching had any impact on the stress they felt from being in college. While two students felt more time in coaching was needed to fully answer this question, all the participants identified specific ways that coaching had enhanced their capacity to manage daily stress more effectively. Most students reported that coaching helped them develop reliable strategies for planning and using time more effectively. As Parker and Boutelle (2009) found, coaching helped these students minimize the daily stress of college by enhancing their proficiency with managing their time, goal-directed behaviors, and emotions.

Steve and Rob both reported that the coaching sessions themselves were a break from daily stress that often left them feeling much more optimistic about meeting their goals. Both reported that coaching helped them feel that the demands on their time were more manageable. Steve tried to follow a consistent schedule to maintain his academic success. Despite achieving a 4.0 GPA during both semesters of his freshman year, he worried a great deal that his grades would slip. Steve noted that his coaching sessions were a productive and welcomed break from these tensions:

[Coaching] is just a nice break from my day. I usually have it on Wednesdays and Wednesdays are really busy. Some people feel less stressed after they've sort of planned out what they're going to do about something they are stressed about. Because it takes away the question of, "Oh, how am I going to do this?" Oh, this is how I'm going to do it. I feel less stressed about it because I know I can get it done.

Finally, students were asked to complete this open-ended statement: "Working with an Edge coach helps me feel ____." Students stated that working with a coach left them feeling more proficient, less overwhelmed, and emotionally supported. Participants reported feeling more "proactive" and "organized" due to coaching. Having survived a challenging sophomore year, Zach provided a brief but powerful response when asked how coaching made him feel. "Confident," he said. "Everything is doable." And then, grinning broadly, he added, "Yeah."

As participants discussed coaching's impact on their process for accomplishing goals, self-talk emerged as a final and specific area of growth. Self-talk refers to the use of covert or overt language to organize one's thinking or engage in problem-solving skills (Depape, 2006; Duncan & Cheyne, 1999). Barkley (1999) and other researchers posit that adults with ADHD are often delayed in their development of effective self-talk as an executive functioning skill. With one exception, students described a growing use of self-talk that they attributed to coaching. This form of verbal reflection had various purposes and benefits. Some students simply used self-talk to remind themselves of their goals. Several students described self-talk that kept them on task by identifying negative or positive consequences to their current behavior. Steve compared his self-talk to a chess game as he found himself anticipating what his coach might ask him while working on his goals in-between weekly sessions. Joe found himself hearing his coach's voice during the week, buoying his confidence by countering self-critical doubts with a reassuring confidence that he was making progress on his goals. Two participants provided particularly telling examples of their use of self-talk. Olivia described how she used it to promote on-task behavior:

If I have on my Google calendar that I have study time now when I come from class and I'm like, "I'd rather just watch TV," I would be like, "This is time that I'm going to be missing sleep later if I'm not getting stuff done now." Which isn't coming from my coach. She's not telling me to not sleep to finish things. There's a new level of awareness of my time and how I spend it, which came from her influence, for sure.

Joe described many instances when his motivation or energy level lagged. These experiences left him feeling unsettled, complicating his ability to persist at his many academic responsibilities with any sense of optimism or enthusiasm. While this pattern of procrastination continued during coaching, Joe was clear that it happened less often. His changing use of self-talk helped to account for this trend:

When I'm not improving, when I'm not doing the things that I'm supposed to be doing, which is, admittedly, quite often, [I'll say to myself], "You're really tired because you pulled an all-nighter for

this exam that you studied for. You skipped your class this morning." You hear different things like that. You hear [your coach's] two cents points on what are the pitfalls of specific things like, "You should have the notes for class." If it's not [my coach's] voice, it's my voice inspired by her voice, definitely.

Several students explicitly stated that the self-regulating skills they learned in coaching helped them enhance their sense of self-control. By employing the ideas they generated in their coaching sessions, students recognized that they were increasing the likelihood of accomplishing their priorities in a less stressful manner. Near the end of his freshman year, Steve said that working with a coach helped him feel "in control. Just like the planning thing. And if you have the ability to set goals and to design ways to reach those goals, then you are in control of what you can do." Olivia echoed Steve's experiences when she replied:

I would say "organized." In control, not of myself but of my daily life and of the situation; daily experiences. Probably less stressed and more confident in my abilities to get the things done that I need to get done, again, in a timely manner.

Discussion

This small pilot study investigated coaching's impact on the academic experiences of seven undergraduates with ADHD. After 10 weekly half-hour phone sessions with a highly trained ADHD coach, most of the students' grades increased. One remained the same at a 4.0; two students' grades dropped slightly. The participants' LASSI cluster scores all increased in the areas of Skill, Will, and Self-Regulation, particularly strong growth was seen in their Self-Regulation pre/post scores. Three major themes emerged from qualitative interviews with students about their coaching experiences, in which they used personal artifacts to discuss how coaching had influenced their thinking and behaviors. These themes were strengthened by patterns in their GPAs and LASSI scores. First, coaching helped students enhance their ability to achieve academic goals that, in many cases, become more specific and rigorous as the study progressed. Second, the participants enjoyed working with their coaches. This was due to the coaches' ability to interweave challenges and supports into their work with students. Coaches

challenged students to make their goals more specific, develop more realistic plans for achieving them, notice and report on ensuing barriers or successes, and be accountable for their efforts to take action on their plans. At the same time, coaches supported students by listening without judgment, affirming their feelings, and sharing relevant information about how other students with ADHD have succeeded in academic settings. Finally, students reported feeling less stressed and more in control of their academic and personal lives. They expressed greater confidence in their ability to sustain effective efforts regarding their studies, thereby demonstrating greater academic self-regulation.

These findings suggest that coaching appears likely to help many college students with executive functioning challenges achieve greater academic success. For students who do not respond well to prescription medication for ADHD, who choose not to use a pharmacological treatment, or who do not have a diagnosed attention disorder, however, coaching may emerge as a viable new tool for enhancing the matriculation of at-risk students. Coaching also appears to help students manage daily levels of non-clinical stress, worry, or anxiety about their academic goals. As Parker and Boutelle (2009) found, students in this study began to feel, after just one semester of coaching, greater confidence in their ultimate success that enhanced their motivation and sense of well-being. Students with ADHD are often at risk for experiencing significant affective distress as they attempt to manage their increased demands on their executive functioning once they transition to college (Weyandt & DePaul, 2006; Wolf, 2001). Clinical disorders such as depression and anxiety are appropriately treated by psychiatrists, psychologists, and trained therapists. That said, coaching may succeed in minimizing the threshold of affective distress that ultimately triggers a need for more formal psychiatric services as students struggle to take greater control of their schedules and lives. This effect may have benefits for students with and without ADHD as campuses report a growing population of students flooding counseling centers after becoming overwhelmed by the demands on their daily functioning and problem-solving skills (Kadison & DiGeronimo, 2004).

The participants in this pilot study were clear that coaching helped them achieve academic success with lower levels of stress as their self-regulation grew. Coaching has been compared to therapy, in

that both models employ the use of questions to elicit information from individuals (Jaksa & Ratey, n.d.). This similarity has created some confusion on college campuses that seek to identify differences between coaching and other models, such as therapy, and the types of professional training that qualified coaches should have (Byron & Parker, 2002; Quinn et al., 2000). None of the participants described their coaches as therapists or seemed to think of coaching as a form of counseling. Indeed, Tim noted that coaching helped him appreciate his need for additional therapy. Still, many students reported that their coaches' empathy, support, and assistance enhanced their skills while also diminishing their worries about meeting their academic responsibilities. This finding has been reported in other studies of ADD college coaching (Parker & Boutelle, 2009; Zwart & Kallemeyn, 2001). Rob summed up the reassuring but non-therapeutic nature of coaching when he said:

It's nice to have someone there that – for instance, if you have a really tough week, you can express some stress and then [my coach] will say, “Okay, well, this sounds hard, but doable. Let's break it down.” And then through that process, I wasn't stressed out then but I knew I was going to be in a couple of days, since I had things due back-to-back-to-back. I was going to be stressed out. By having her there to help understand that it's all doable, definitely helped the stress.

Limitations

Primarily qualitative in nature, this small pilot study generated findings that cannot be generalized to other settings or populations. Indeed, given the decision to restrict seniors and undergraduates who had been diagnosed with co-existing disorders in addition to ADHD from participating, the pool of potential participants in this study was narrow by design. The seven participants constituted more of a convenience sample, consequently, and ultimately included just one female participant. The pilot study took place at a highly selective university whose admissions standards resulted in a participant pool of students who, with one exception, were already achieving strong grades. Despite these limitations, students' stories about their coaching experiences revealed significant daily struggles with organization, time management, self-esteem, and chronic feelings of being overwhelmed. While these

students may have greater tools for resilience than a broader population of college students with ADHD, they developed new competencies through coaching that supported their academic success and enhanced their quality of life. Coaching may produce even more significant outcomes in other settings.

Implications for Further Research and Practice

A larger study on a variety of campuses (i.e., 2-year and 4-year campuses, including postsecondary settings that are not as academically rigorous as the pilot study setting) is needed to further test the relationship between ADD coaching and academic success. A comparison group design would enhance the ability to compare students with ADHD who received coaching with those who did not, with a focus on any differences that could be attributed to coaching. The authors are currently conducting a larger field test of this nature, using insights gained from this present study. In addition to GPA and LASSI scores, an appropriate measure of students' subjective well-being could further identify any meaningful differences between students who receive coaching and a comparison group of students who do not.

As the number of postsecondary students with ADHD who request academic supports grows, and campus professionals respond to additional requests for help from students who may or may not have ADHD but request help with organization, time management, and emotional self-regulation, coaching appears to be a promising new model of academic support. Some campuses, such as Landmark College and the University of North Carolina at Chapel Hill, provide on-campus coaching from highly trained service providers. Many other campuses (Byron & Parker, 2002) seek sources of highly trained coaches to whom they can comfortably refer students. Private sources of highly qualified ADD coaches such as the Edge Foundation may create a useful new option for disability service providers who are not, themselves, trained coaches.

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