Coaching and College Success

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Abstract

Students with learning disabilities (LD) and Attention Deficit/Hyperactivity Disorder (ADHD) represent the largest segment of college students with documented disabilities. Despite enhanced access to accommodations under the Americans with Disabilities Amendments Act, this growing population continues to take longer to complete a college education and drop out at higher rates than peers without disabilities. This population has deficits in the important executive functioning and self-determination skills needed for success in college. Most college-based interventions are not targeted at improving these skills. Coaching is a promising service delivery model that institutions of higher education are beginning to provide to students with LD and ADHD. This study used a mixed methods research design to investigate coaching's influence on factors that contribute to executive functioning and self-determination skills which may underlie academic success and overall life functioning of college students with ADHD and LD. Results indicate that coaching is a promising practice for this population and that it improves students' self-awareness, self-management skills, and subjective well-being. Implications for future research on coaching and campus practices are discussed.

Keywords: ADHD, LD, coaching, college success

A college degree is strongly associated with a better quality of life for individuals with and without disabilities (Porter, 2002; Tagayuna, Stodden, Chang, Zeleznik, & Whelley, 2005; U.S. Census Bureau, 2002). However, the number of high school students with disabilities attending college in the United States remains relatively low. Estimates suggest that youth in the general population are four times more likely to enroll in a four year college than youth with disabilities (Wagner, Newman, Cameto, Garza, & Levine, 2005). Only a fraction of students with learning disabilities (LD) and/or Attention-Deficit/Hyperactivity Disorder (ADHD) are likely to enroll in higher education in spite of having average to above average intelligence (Cortiella, 2009; Frazier, Youngstrom, Glutting, & Watkins, 2007; Murphy, Barkley, & Bush, 2002). Regardless, students with learning and attentional disabilities are the fastest growing population of students with disabilities on college campuses (Harbour, 2004; Henderson, 2001). Between 1988 and 2001 the number of college freshmen reporting having LD rose from 16 to 40% (Henderson, 2001).

Barriers to Postsecondary Success

Unfortunately, students with ADHD/LD face many barriers in college. Murray, Goldstein, Nourse, and Edgar (2000) reported that students diagnosed with LD were less likely to graduate from four year colleges than their peers without disabilities. Blackorby and Wagner (1996) reported that 14% of high school graduates with a disability obtain a postsecondary degree two years after high school whereas their counterparts do so at a rate of 53%. Within three to five years, those numbers rose to 27% and 68% respectively. Another study suggests that students with disabilities obtain a college degree at a rate that is about 12% lower than

other students (U.S. Department of Education, 2000). Students with ADHD/LD may graduate at even lower rates than students with other disabling conditions (A. D'Amico, personal communication, January 29, 2008). It has also been posited that students with ADHD/LD may graduate at similar rates but it may take them longer than their non-disabled peers (Wessel, Jones, Markle, & Westfall, 2009).

Research suggests that students with LD/ADHD have more academic, social, and emotional difficulties, which may impact graduation rates. Academic and study skill weaknesses place them at risk for lower grades, higher rates of academic probation, and becoming academically ineligible (DuPaul, Weyandt, O'Dell, & Varejao, 2009; Frazier et al., 2007; Gregg, Hoy, & Gay, 1996; Heiligenstein, Guenther, Levy, Savino, & Fulwiler, 1999; Heiman & Precel, 2003; Rabiner, Anastopoulos, Costello, Hoyle, & Swartzwelder, 2008). Although emotional and social challenges may be commonplace for all college students (Kadison & DiGeronimo, 2004; Seiben, 2011), research indicates that these issues are more pervasive for students with ADHD/LD. Students with ADHD have a high rate of co-morbidity with psychiatric diagnoses such as depression and anxiety that can impact persistence in college (Barkley, Murphy, & Fischer, 2007; Norwalk, Norvilitis, & MacLean, 2009). Additionally college students with ADHD/LD tend to have a lower selfconcept, which may complicate their adjustment to daily stressors (Barkley et al., 2007; DaDeppo, 2009; Norwalk et al., 2009; Shaw-Zirt, Popali-Lehane, Chaplin, & Bergman, 2005). Research has identified executive functioning and self-determination as two processes that can minimize the academic, social, and emotional barriers in college settings. A better understanding of these processes can help identify targeted interventions that may help improve the postsecondary outcomes of students with these disabilities.

Executive Functioning & Self-Determination Skills

As students with ADHD/LD strengthen their executive functioning and self-determination skills, they are more likely to succeed in rigorous educational environments (Field, Sarver, & Shaw, 2003; Meltzer, 2010). Executive functioning permits individuals to be self-directed; that is, to freely choose their thoughts and actions to solve problems, select goals, make plans to implement goals, and activate, inhibit, monitor, redirect and manage themselves (Baddeley, 2003;

Barkley, 1997; Gioia, Isquith, & Guy, 2001). Executive functioning is an umbrella construct reflecting selfregulatory functions that organize, direct, and manage other cognitive activities, emotional responses, and behaviors (Gioia et al., 2001). The fields of neurology and neuropsychology have accepted that these cognitive processes are neurologically based (Pennington, 1991). Barkley's (1997) work dramatically shifted the view of ADHD from that of a deficit in attention to that of impaired executive functioning; thus tying the disability to deficiencies in everyday thinking processes needed for self-regulation. Similarly, individuals with LD demonstrate deficits in executive functioning (Katz, 1998), evidenced by their struggles with organization and self-management. Denckla (2007, p.8) identifies deficits in executive functioning as the "bridge" binding together the definitions of the two disabilities.

It is understandable why students with executive functioning impairments experience significant difficulties with organization, time management, goal setting, and stress management during their transition to college. The postsecondary environment is characterized by reduced external structures and increased demands on an individual's internal organization and self-management (Katz, 1998). Deficiencies in problem solving, decision making, and inhibitory functions (Biederman et al., 2004; Brown, Reichel, & Quinlan, 2011; Meltzer, 2010) can result in a host of academic, social, and emotional challenges that can result in a lower quality of life.

Because of the difficulties in academic, emotional, and social functioning coupled with pervasive problems in their executive functioning skills, students with ADHD/LD can become overly-dependent on external structures in the environment (Brinckerhoff, McGuire, & Shaw, 2002; Quinn, Ratey, & Maitland, 2000). To combat this pattern, the literature promotes services that facilitate growth in students' self-determination. Field and Hoffman (1994) defined self-determination as "the ability to identify and achieve goals based on a foundation of self-awareness and self-esteem" (p. 164). Self-determination has been compared to autonomy, and is believed to enhance independence and quality of life (Field et al., 2003; Wehmeyer, 1996).

Interventions that promote self-determination are positive and collaborative in nature, fostering security while also providing freedom of choice versus directive, critical, or controlling counsel (Field et al., 2003; Ryan & Deci, 2000). Studies have demonstrated that

successful students and adults with LD exhibit strong self-determination skills. These people are more self-aware, proactive, goal and action oriented, adaptable, and able to exert self-control (Raskind, Goldberg, Higgins, & Herman, 1999; Reiff, Gerber, & Ginsberg, 1993; Wehmeyer, 1996).

A significant relationship has been found between self-determination skills and both, GPA and retention rates for college students with disabilities (Jameson, 2007; Sarver, 2000). Students with disabilities have identified self-determination skills as critical to their academic success in college (Getzel & Thoma, 2006, 2008; Parker & Boutelle, 2009), specifically self-awareness, problem solving, goal setting, and self-management skills which include managing emotions, organizing time and possessions (Field & Hoffman, 1994; Getzel & Thoma, 2006, 2008). College students have also expressed a wish to have learned more self-determination skills prior to their postsecondary experiences (Getzel & Thoma, 2006, 2008).

Postsecondary Interventions

Students diagnosed with ADHD/LD often experience barriers to academic and social success in college. Effective interventions can improve the likelihood of student retention and graduation. All postsecondary institutions are legally mandated to provide "reasonable accommodations" for otherwise-qualified students with disabilities. For college students with LD/ADHD this typically translates to extended test time, provision of a separate testing space, the use of a computer for essay exams, and the provision of class notes or audio versions of reading assignments. These accommodations are designed to create environmental modifications that do not alter essential elements of the course or program, but are not intended to teach students skills or minimize their need for such accommodations (Brinckerhoff et al., 2002). Anecdotal information from students suggests that these accommodations may not be enough when they lack the academic or social skills needed to succeed in the rigorous college setting (Field et al., 2003).

Many colleges and universities do offer academic support services above and beyond the legal mandates (Brinckerhoff et al., 2002). In most cases, these are didactic interventions such as content tutoring or learning strategies instruction that may be available to any student attending classes on that campus. These interventions provide alternate and sometimes crucial support for students who benefit from having someone

reteach course concepts or model a series of study skills steps that are then repeated in the same sequence (Allsopp, Minskoff, & Bolt, 2005). Students with executive functioning deficits may already possess effective learning strategies or have the ability to study class notes in order to learn course content. As Barkley et al. (2007) noted their need is being able to employ existing skills at the "point of performance." They need assistance "not in knowing what to do but in doing what they know" (Barkley, 1997), or self-regulating throughout the week to maintain progress in meeting academic goals across time. The emerging research on coaching suggests that this new service delivery model may be more efficacious than didactic models and accommodations in helping students with ADHD/ LD learn how to self-regulate (Griffiths & Campbell, 2009; Parker & Boutelle, 2009).

Coaching: A Promising Intervention

According to the International Coach Federation, coaching is "partnering with clients in a thoughtprovoking and creative process that inspires them to maximize their personal and professional potential" (International Coach Federation, 2011). Coaches empower the client to select the agenda for the coaching relationship and to design each session. In this collaborative relationship (Whitworth, Kimsey-House, Kimsey-House, & Sandahl, 2007) coaches refrain from telling coachees what to do. Instead, they engage in active listening and promote self-discovery and action by posing meaningful questions designed to trigger a client's deeper critical reflection. Coaches also hold the client accountable for following through on goals, plans, and commitments in a non-judgmental manner which promotes learning about what helped and what hindered the actions in between sessions (Quinn et al., 2000; Whitworth et al., 2007).

Coaching was introduced in the 1990s as an adjunct to the treatment of ADHD in adults and has since grown substantially (Hallowell & Ratey, 1994; Sleeper-Triplett, 2010). Based on tenets of positive psychology (Frederickson, 2001; Kaufmann, 2006; Seligman, 2002; Seligman, Steen, Park, & Peterson, 2005), coaching focuses on what is "going right" with the coachee and shifts the focus from pathology and healing to helping clients enhance his/her strengths and possibilities. Understandably, coaching has been termed a "wellness" model that helps clients live a more balanced and fulfilling life (Jaksa & Ratey, 1999).

Coaching has been criticized due to a lack of empirical support in spite of its popularity (Goldstein, 2005). Only a handful of studies have investigated coaching's impact on college students diagnosed with LD/ADHD and one published study has researched the use of coaching with first-year students for improving retention and graduation rates. This research has reported positive outcomes by depicting coaching's ability to influence growth in students' learning strategies, self-regulation skills, and their overall academic proficiency (Field, Parker, Sawilowsky & Rolands, 2010; Parker & Boutelle, 2009; Parker, Hoffman, Sawilowsky, & Rolands, 2011a, 2011b; Reaser, 2008; Swartz, Prevatt, & Proctor, 2005; Zwart & Kallemeyn, 2001). In addition, coaching has been found to enhance students' subjective well-being, or their ability to manage daily stress while maintaining optimism about their capacity to meet their goals (Field et al., 2010; Parker & Boutelle, 2009; Parker et al., 2011a, 2011b; Reaser, 2008). In a recent study with non-traditional first-year college students who did not report any disabilities, students who were coached were more likely to persist in college. This difference continued after 6, 18, and 24 months and participants were more likely to graduate. The researchers found that coaching had a statistically significant impact on retention/graduation rates of these students (Bettinger & Baker, 2011).

Gaps in the Literature

Many limitations exist in the small but growing literature that has investigated coaching's impact on college students. To date, only one study has used a randomized control group design to investigate relationships between coaching and possible improvements in executive functioning skills with ADHD/LD students. Field et al. (2010) found that college undergraduates with ADHD who received two semesters of coaching on ten different campuses made significantly larger gains in self-regulation skills and subjective well-being compared to undergraduates with ADHD who were not coached. These findings need to be replicated on other campuses and better understood with longitudinal research. Although several coaching studies have used self-determination as an outcome, only one has reported the use of a specific self-determination measure (Parker & Boutelle, 2009).

In addition, it is not clear whether existing studies of coaching have investigated the same model of coaching; published studies vary in amount of detail provided about specific components of coaching, including the levels and types of training employed by the coaches (Field et al., 2010; Swartz et al., 2005). No studies investigated coaching's efficacy with graduate students or postsecondary students from diverse backgrounds or students diagnosed with LD who have been found to also struggle with executive functioning skills (Denckla, 2007). Most studies to date focus only on full-time undergraduates diagnosed with LD/ADHD (Field et al., 2010; Parker & Boutelle, 2009; Parker et al., 2011a, 2011b). Finally, it appears that no published studies of college coaching have employed highly trained, campus-based coaches. The current study attempted to fill some of these gaps in the coaching literature.

Methods

Research Questions

The research team explored the following four research questions:

- 1. Does coaching increase participants' level of self-determination?
- 2. Does coaching improve participants' executive functioning skills?
- 3. Does coaching improve participants' overall academic skills?
- 4. From students' perspectives, what are the benefits and limitations of coaching?

Sample

A self-selected, convenience sampling technique was employed to investigate the treatment effects of the coaching intervention. Participants included undergraduate and graduate students who were eligible for services at an office for students with LD/ADHD disabilities at a large public university in the southern United States. In order to receive services, students are required to submit documentation that they have been diagnosed with a learning disability (LD), Attention-Deficit/Hyperactivity Disorder (ADHD), or both. 24 of 26 participants remained in the study until its completion. Several participants had comorbid diagnoses as well. The final sample consisted of 12 males and 12 females. The group's relatively diverse demographic characteristics were reflected in their ethnicities (18 white, three black, two Asian/Pacific Islander, one "other") and the inclusion of 17 undergraduates and seven graduate students (see Table 1). A purposive

sample of six treatment group participants were chosen for qualitative interviewing at the end of the study (see Table 2). These six students were selected to represent a broad range of the following characteristics: gender, diagnoses, graduate/undergraduate level, race, and GPA.

Study Design

Researchers used a nonequivalent groups quasiexperimental design, to investigate the impact of coaching services on the executive functioning, selfdetermination, and academic success. All 500 students who were receiving services at the university's LD/ ADHD office were invited to participate in this study. Students could volunteer to be in the treatment group, comparison group, or to not participate at all. There were 16 students in the treatment group (eight per coach) and eight in the comparison group. Each student in the treatment group received between 12 and 24 coaching sessions over two successive semesters, and was assigned to one of two trained coaches. Both coaches were certified by the Coaches Training Institute, one of the founding coaching training programs in the country, and have been practicing for several years. This training required completion of five coaching courses (116 hours of training) and a six month in-depth certification program. Coaches assisted students in setting specific and measurable goals for their lives while helping them develop action plans to reach those goals. Students were held accountable for implementing their plans and encouraged to reflect on what helped and hindered their progress. Rather than provide solutions, coaches used broad questions to encourage student reflection. Session notes were reviewed for consistency of technique four times throughout the study.

Due to ethical concerns, researchers did not control for the assignment to groups using random assignment. Withholding coaching from students who qualified for this service was considered ethically questionable, and services offered at a university are required to be available to students at all times. The self-selected groups could have been meaningfully different prior to the study, consequently, which would threaten internal validity and preclude the determination of casual inferences.

Data Collection

Treatment group participants attended approximately 6-12 weekly coaching sessions for two 12 week semesters. These 30 minute sessions took place on

campus in person or via the telephone. Students worked with their coach to develop systems and structures to reach their goals and agreed to be held accountable for their commitments. A non-coach researcher conducted four fidelity checks by monitoring all session notes written for study participants. Checks were conducted, twice each semester to ensure that both coaches used the agreed upon coaching techniques and focused on goals that were established by the student.

Prior to the implementation of the coaching intervention, all participants were asked to complete three surveys. All three instruments were tested in a pilot study to ensure that their use was appropriate with this population. The same instruments were used as post-test measures at the end of the study. Reminder emails were sent to students at the beginning and end of the study when it was time to complete these instruments and all students received small incentives (five dollar gift cards for the university student store) for their participation.

Each qualitative interview was done in person by the same non-coach researcher for one hour. The 12 questions generated by the research team pertained to their perceptions about the impact of coaching on their self-determination, executive functioning, and academic success (see Figure 1). Conversations were audio recorded and then transcribed for analysis. The data were analyzed for pertinent and meaningful themes by two researchers to ensure inter-rater reliability; 89% agreement was reached.

Measures

Measures were chosen based on theoretical underpinnings of what is known about LD/ADHD, coaching, and how these variables can influence the academic and social-emotional experiences of college students. Our dependent variables, student's levels of self-determination, executive functioning, and academic skills, were measured using existing and validated instruments that have been used in numerous other research studies.

The first instrument, the Self-Determination Student Scale ([S-DSS]; Hoffman, Field, & Sawilowsky, 1995, 2004) measures the extent to which a student makes choices according to an awareness of his or her own personal needs or by acting as his or her own primary decision maker when determining actions and responses to life events. The second instrument, the Behavior Rating Inventory of Executive Function-Adult

Table 1 Sample Characteristics

		Population (n=24)	
Variables		n	%
Sex			
	Male	12	50.0
	Female	12	50.0
Status			
	Undergraduate	17	70.8
	Graduate	7	29.2
Race			
	Black	3	12.5
	White	18	75.0
	Asian/Pacific Islander	2	8.3
	Other	1	4.2

Table 2 Qualitative Sample Characteristics

Sex Male 3 50.0 Female 3 50.0 Status Undergraduate 3 50.0 Graduate 3 50.0 Race Black 2 33.3 White 3 50.0 Asian/Pacific Islander 1 16.6 Disability LD 2 33.3 ADHD 3 50.0 Both LD & ADHD 1 16.6		Population (n=6)	
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Disability LD 2 33.3 ADHD 3 50.0 Both LD & ADHD 1 16.6 Co-morbid Diagnoses Yes 4 66.6	White	3	50.0
LD 2 33.3 ADHD 3 50.0 Both LD & ADHD 1 16.6 Co-morbid Diagnoses Yes 4 66.6	Asian/Pacific Islander	1	16.6
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Both LD & ADHD 1 16.6 Co-morbid Diagnoses Yes 4 66.6	LD	2	33.3
Co-morbid Diagnoses Yes 4 66.6	ADHD	3	50.0
Yes 4 66.6	Both LD & ADHD	1	16.6
	Co-morbid Diagnoses		
No 2 33.3	Yes	4	66.6
	No	2	33.3

([BRIEF-A]; Roth, Isquith, & Gioia, 2005), measures executive functioning, which is a cognitive process of self-regulation that helps a person manage his or her resources in order to achieve a goal. The third instrument is the Learning and Study Strategies Inventory ([LASSI]; Weinstein, & Palmer, 2002), measures beliefs and behaviors related to academic success.

Results

The research methods, including both quantitative and qualitative techniques, were designed to allow the researchers to measure changes in the pre- and post-intervention survey scores and capture self-reported student insights about coaching in real time. Unfortunately, this study had an extremely small sample size and did not yield statistically significant quantitative outcomes. The qualitative interviews however, offered a rich and detailed understanding of students and their experiences and thus, the majority of the results are focused on the qualitative data. In the fidelity checks, no

disparities were found between how coaches conducted their sessions and the coaching model. Below, results of each research question are addressed followed by a case study.

It is noteworthy to mention two findings uncovered in the quantitative analysis. First, every student who self-selected to be in the intervention group began the study with lower pretest scores than comparison group students in all three measures. Second, the posttests revealed that all intervention group students improved in every post-test measure and except in one case, to a greater extent than the comparison group. While the t-tests did not yield significant results, the patterns indicate that upon further research using larger, randomly assigned groups, coaching will likely be shown to be an effective intervention technique for improving experiences of college students with LD and ADHD.

Research Question 1: Does coaching increase participants' level of self-determination?

The thematic analysis of qualitative interview tran-

- What impact, if any has coaching had in helping you learn more about your strengths and weaknesses?Could you give me some examples of when that happened?
- 2. What are the major advantages that coaching offers you?
- 3. When people choose their own goals and make their own decisions, they are said to be 'autonomous.' Could you talk a little about whether coaching has had any impact on your autonomy?
- 4. I am curious to know if you think that coaching has influenced your self-esteem or how much you value yourself?

 Do you value yourself any more, or in different ways, than you did before you started coaching?
- 5. Please tell me about 1 or 2 goals you have worked on during coaching.
- 6. With those goals in mind, what role if any has coaching played in helping you to achieve those goals?

 Has coaching changed anything about how you work on your goals?
- 7. In last year's study students indicated that they thought and felt differently about approaching a difficult task or a big project after experiencing coaching. Does that surprise you? Why/why not?
- 8. Has coaching influenced how you use self-talk or how you think to yourself?
 - Could you give me 1 or 2 examples of this?
- 9. Has coaching had any impact on how you manage your mood or emotions?
 - Are there any new behaviors developed from coaching that you use continually?
 - Can you give me a situation when you found yourself more self-aware or able to observe your own behavior?
- 10. Beyond your experiences as undergrad/graduate student, I wonder if you can give me an example of how coaching has impacted other parts of your life
- 11. If someone was going to write a story about coaching's impact on your overall life, what would be a good title?
- 12. If you had to redesign coaching so that it was more effective for you, what changes would you make?

scripts enriched the researchers' understanding of how coaching influenced students' self-determination. Specifically, students reported that coaching enhanced their self-determination in five ways. The intervention enhanced their autonomy by promoting their self-awareness, bolstering their self-esteem, increasing their effectiveness in working toward goals, strengthening their ability to establish more realistic goals, and encouraging their critical reflection on their goal-attainment efforts.

A sampling of comments illustrates students' reflection on their experience with coaching and its impact on their self-determination. Students' names have been replaced with pseudonyms to protect their confidentiality. Heather, a graduate student with ADHD, anxiety, and depression sought coaching to help her manage multiple responsibilities (coursework, job, and internship). Here, Heather directly links coaching to better self-esteem:

So [coaching] has helped my self-esteem in the way that it has shown me something that I found to be very true, which is when I do what I'm supposed to do and make responsible decisions, ultimately I feel better about myself because it helps me to be successful, right? And when I choose to procrastinate and not do the work that I'm supposed to do or put off deadlines or cram for a test the night before or stuff like that, it makes me feel worse about myself because my performance is not up to par.

Heather describes how coaching has helped gain confidence in communication, a long-standing difficulty for her.

I've had some communication issues, a lot of them fear-based. Difficulty communicating with anywhere from my peers, all the way up to professors and on up to administrators...I'd rather ignore the problem or just not talk to them at all or wait until they contact me or whatever. And, I've gained confidence over time by developing goals with my coach.

Michelle, a graduate student with ADHD, also sought coaching to help her manage numerous responsibilities of her program (coursework, job, and research assistantship). Michelle had several Incomplete grades from previous semesters, so, part of her coaching focused on strategies to help her catch up while also remaining current with that semester's courses. Michelle discussed her strengthened ability to work more effectively towards goals as the result of working with her coach:

My coach showed me how to have a plan and that if I have that plan, I can work through pretty much anything and set goals...and follow through in projects... So [one of the calendars we use shows] the whole semester...on one page. She calls that the "road map;" we put big things on that calendar. So the way I look at [assignments and projects] now are kind of like, "Okay, this is really four weeks away instead of this arbitrary number in my head." I've been able to see things clearly [with this planning tool].

As for setting reasonable goals, Michelle continues:

Having [a coach] really helps me have manageable goals. Whereas in the past, I probably have taken on chunks and didn't realize... It would just be too much in the end and I would kind of break down.

Michelle has been able to apply self-advocacy skills gained in coaching to her personal life as well.

So I think I've communicated with my husband better through her, through coaching as far as, "I need this; let's sit down and talk about this." For example, last week, I went to [coaching] three weeks ago and then we had spring break. I invited some people over and I'm normally the one trying to clean and cook and I felt overwhelmed. And so, I stopped and asked my husband for help and it was so much better... So a lot of times now I look at the things and I'll say, "Is this worth my time?" or "Is there something else I need to be doing?" or "Can I ask him for help?"

Research Question 2: Does coaching improve participants' executive functioning skills?

Interview data produced many examples of how students believed that coaching enhanced their executive functioning skills. Overall, students discussed six ways that coaching helped them improve how they managed themselves and their resources in order to achieve their goals. Participants indicated an improvement in self-talk, an executive function skill in which one uses covert or overt speech to manage emotions and problem-solve (Depape, Hakim-Larson, Voelker, Page, & Jackson, 2006; Duncan & Cheyne, 1999). Barkley (1997) and others contend that many individuals with ADHD are delayed in their internalization of effective self-talk as they grow into adulthood. In addition to self-talk, students also cited improvements in five other executive functioning skills: regulating their emotions, engaging in effective problem solving, developing clearer plans, creating a more balanced and fulfilling life, and initiating and persisting at tasks more consistently.

Comments below illustrate students' reflections on their experience with coaching as it relates to executive functioning. Here, Heather described her growing ability to use self-talk to redirect her behavior:

...over time, having talked to [my coach] so many times about [dealing with distractions], she has led me to realize, to become self-aware at the moment when I'm moving the mouse to click on the tab that says Facebook. Or to open the game. She says, "You are making a conscious decision to not do what you intended to do in that study session." [Now] when I'm about to open...a goof-off page...this feels a little uncomfortable. It's not as easy as before [coaching], when I'd just blame it on, "Oh, I get really distracted." Now it's like, "I have to take accountability for it." And it's a big difference than what it was before.

Heather also described her ongoing issues with procrastination which often leads to feelings of remorse and even shame. Coaching has helped her manage her negative self-talk about procrastination:

I go through phases of a lot of negative self-talk. But whenever I admit to it to my coach and say, "I've been thinking these things, like I'm a failure and I'm not like any of the other students, or I'm never going to get through school," or things like that. Now, I know that when I start talking that way, a little red flag pops up. I know that's not the right way to talk to myself, through lots of time talking to my coach. That's the cool thing, that a little red flag pops up and I know how to replace

those thoughts with positive self-talk, affirmations or, "I know that I can do this." Some days are easier than others. Usually those thoughts do come back after being gone for a while. Through coaching, I have the tools to battle it, so that's cool.

Tim, an undergraduate student with ADHD, also believes that coaching has also helped him not stay discouraged for too long when he hasn't followed through with plans.

I guess [coaching] may have removed the guilt. You know, you waste a Saturday, you play video games, you watch basketball, and you do absolutely nothing. That's not something to be humiliated over and you can't dwell and can't let yourself be damned for one bad day.

Josh, a post-baccalaureate student with ADHD and bipolar disorder, described coaching's ability to help him problem-solve more effectively:

For example, one of my weaknesses is forethought. So when it comes to preparing for something, I don't necessarily always allot enough time or take the amounts of time to consider all the variables involved. The ability to kind of lay it out [in coaching] really helped me improve that. Also... just having that ability to say, "Alright, Josh, let's think through the entire process and preparation." So that's one positive change that I've noticed as a result of focusing on my weaknesses.

Josh continues by describing how coaching helped him problem-solve around mood-management:

For example, October and February are just notoriously bad for me. So [learning] how can I plan for that ahead of time has been really effective. And also just not feeling like I'm a victim to my mood. I love to write and I write my best stuff when I'm depressed. So that's just one of those empowering things that I do now that, "Okay, I'm in this mood. Why don't I just go ahead pull out a journal and start writing?"

Research Question 3: Does coaching improve participants' overall academic skills?

Students talked at length about how coaching

helped them improve skills that can enhance academic success in a postsecondary setting. They identified six broad ways that coaching helped them improve academic skills, including improved self-advocacy, improved grades and GPA, help with writing papers, increased persistence with college and maintaining full-time enrollment status, improved study skills, and an improved ability to submit assignments on time. A variety of comments portray students' perceptions about coaching's impact on their academic skills. Here, Josh described how coaching helped him proactively communicate with professors about progress on papers:

And it turns out, turning in papers on time – one of the biggest strengths was when to ask for help. I think generally I would have waited until after the deadline to see the flags and say, "Hey, I really need help." But coaching kind of allowed me to be a little bit more proactive and create a conversation with my professors even if things aren't on time and still within a reasonable time frame that's agreed upon by both parties.

Adam, an undergraduate with ADHD, depression, and Asperger's Syndrome, relayed how coaching was a key factor in improving his academic standing. He enrolled in coaching after he was placed on academic probation:

[Coaching] had a tremendous impact. I went from below a 2.0 [GPA] student who was on the verge of dropping out to somebody who has totally acceptable grades, G.P.A., social life, academic and extracurricular involvement. Even though I don't think the coaching itself was entirely attributable to all the changes that happened, I think it was one of - if not the - most important factors that kind of started the cascade of good, positive things that started happening for me. Since then I have had 3 semesters and during the summer I took three classes and got A's in all of them, had a 4.0 semester, and this most recent semester I had a 3.25 semester. There were pretty drastic changes, so that's the biggest goal that I've had.

Research Question 4: From the students' perspective, what are the benefits and limitations of coaching? During the qualitative interviews, a member of the research team asked students to identify the overall

benefits and limitations of coaching. Students identified an array of positive outcomes after experiencing coaching. While far fewer in quantity, their comments also point to several limitations.

Students' comments about coaching's benefits can be categorized into three broad themes: improved cognitions, behaviors, and subjective well-being. Students described how coaching impacted their cognition by helping them develop critical thinking skills. Because coaches ask students to evaluate their weekly progress and struggles, they gained practice in the habits of self-reflection that helped them think critically when planning for the following week. Coaches also asked students to consider alternative solutions to problems, giving them practice in thinking flexibly.

Adam described the impact of coaching on his ability to consider alternative perspectives. He worked with his coach on social concerns, which helped him think differently about his interactions with other people:

[Coaching helped me] expose myself to social situations that I was uncomfortable with. And especially a huge thing was dealing with rejection or perception of rejection and not have it ruin me, not have it ruin my subsequent interactions. And not have it form the basis of what I thought about people as a whole and about women that I found attractive. It was more of a secondary purpose, a secondary goal, than academic but it was also vitally important, in my opinion, and we worked on it. The progress in this is kind of harder to measure but I feel like it's been helping.

Josh stated that coaching helped him enhance his proficiency with self-reflection:

I know personally, for me, especially since I'm a part-time graduate student, you can kind of get lost in the shuffle. But for the most part, coaching allows you some form of weekly communication. And not only does that let you know someone's thinking about you, but also it forces you to kind of think about yourself. And that's really crucial when it comes to making yourself accountable to your progress.

In terms of thinking critically when planning, coaching has also positively impacted Josh:

I think one of my difficulties is that I do like to set goals and have a game plan, but it's usually unrealistic. So coaching has been effective to help me refine and re-regulate what my goals are and, more importantly, create the action items that will help get me to my goals.

Students' comments also illustrated how coaching impacted their behaviors, the second broad theme found in coaching's overall benefits. Students' comments captured an improved ability in taking effective action on both life and academic goals. In several cases, students also described progress in taking action to use other resources on campus.

Heather developed action plans with her coach to manage academics and create healthier life habits:

So I guess we've talked about stuff like organization in terms of, not in terms of school but in terms of things that I need to do to take care of myself. Like incorporating exercise or taking my medicine at the right time every day or eating healthy food and getting enough sleep. Just the overall things that we need to do as students to be healthy and especially students with ADD.

Michelle described how coaching improved her approach to writing papers:

Another [goal] that has been really hard for me is breaking down my assignments. So we've been talking about papers that I know are due at the end of the semester. And each week I've had to do something towards doing that paper. I haven't always been as successful as I want to be, but it has allowed me to think differently about how I approach projects. Because, typically, I just wait until a week before; two, three days before and it's stressful and chaotic. So at least with this I've been learning how to manage pieces of the project.

Coaching has also helped Michelle plan with greater awareness of time:

...in the past I would just say, "Okay, today I'm going to study," but [my coach] forces me to say, "Okay, what are you going to do? How much time are you going to spend on that? Write in [your

planner]. When are you...?" So it really makes me realize how valuable the time is in a day. And it helps me be focused.

Finally, Adam credited coaching with helping him utilize accommodations as well as additional university resources:

Also, through coaching, I got the accommodations the first couple of semesters. So I got note-takers for the first time and [my coach] introduced me to Dr. _____, who I'm seeing at Counseling and Wellness office for medications. The kind of bottleneck that I explained earlier, about how coaching was the gateway that opened up to other things that also spiraled into positive changes. I guess coaching was really what led me [to] the threshold for me to have access to all of these different resources.

The third broad theme regarding the benefits of coaching was a positive impact on students' subjective well-being. Students enjoyed how coaching helped them manage negative emotions and stay motivated and confident about reaching their goals. Tim described how coaching provided him with tools to regulate stress:

I'm generally a pretty happy person but I get stressed out very easily because I put stuff off, procrastinate. So it all builds up. I think it [coaching] has made me less prone to panic about something. Hopefully, I think it's [that] I'm more willing to - rather than just give up on something - to take a deep breath and calm myself down and look at how I am going to approach it.

Prior to coaching, Adam struggled to sustain his effort and motivation throughout an entire semester. This impaired ability led to poor grades and, ultimately, academic ineligibility. Adam explained how coaching helped him keep his emotional state steady, enabling him to maintain effort and improve his grades to A's and B's:

Back in the day, I guess one of my biggest stumbling blocks was the feeling that all this didn't matter or nobody really cared. So it was part of a downward spiral to just lack of performance and just apathy. But having someone to let me self-correct at least once a week definitely helped me [change] from just uncontrollably heading downward. And I guess

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coaching, the fact that it helped me improve so much on the core areas of my life in general, helped me become a more happy and stable person. And when you feel strong overall, I think it just helps you overcome bad moods and bad emotions better and quicker because you have a bigger framework in which you can process them.

In addition to asking students what they found most helpful about coaching, the researcher also asked them to describe any limitations of the coaching model or how this service was provided to them. Many of their comments focused on logistical restrictions, such as building location and length of sessions. Two students wanted even greater accountability than coaching provided. Students also suggested that including a broader range of topics in coaching sessions, such as planning for life after graduation, would have been helpful. Josh detailed the limits of 30-minute appointments:

One of the challenges, I think, is just kind of the half hour period. So generally we start each session with, "How have you been?" And that can take anywhere from three minutes to 15 minutes. And by the time we actually dive into some of those, "Well, let's look at your behaviors from the past week. What created those outcomes, whether that's positive or negative? How can you continue those positive outcomes?" And this happens almost every 20 minutes in so it's really hard to think about the present moment, what's coming ahead, so I feel I'm just really limited by the half hour. An hour might be a little more effective.

Tim was one of several students who benefited from the accountability built into coaching, but wanted even more:

As much as we have worked on accountability, I have improved, but I certainly have shirked plenty of responsibility and things. So, I don't know if this is a broader coaching thing. But, my setting up more of an aggressive accountability plan. More of a recording, "Did you do this? No, I didn't do this."

Finally, Adam wondered how his disabilities would impact him after graduation in a different setting. In recognizing what he had gained from coaching, the high level of self-awareness was easy to observe. He anticipated new challenges ahead and wished that coaching could help him prepare for this impending life transition.

I don't know, some sort of support for life after college. Because success here [in college] is important but, also, the problems that cause the people like us to have trouble here may also cause us to have problems outside of school but in a different way. And just because we've overcome them in the school context doesn't mean that a different set of problems aren't going to arise due to our disabilities. So, kind of having the future in mind and being able to talk about that, I think, would help.

Case Study

The following case study illustrates more fully the overall impact of coaching on one student who participated in this study. Megan, an undergraduate with ADHD, benefited from consistent coaching in numerous ways, including developing skills to be academically successful in college and in creating and achieving post-graduation plans. Due to her commitment to coaching, Megan made actual changes to her behaviors and her thought processes which improved her college experience and enhanced her life.

Megan was a nervous 19 year old sophomore who was in serious academic trouble when she scheduled her first coaching session (prior to the start of the coaching study). Because she had been experiencing extreme emotional distress during her first semesters in college, her parents were her constant crutch and she reported requiring an excessive amount of parental support. After 3 semesters, her GPA was .23 and she became academically ineligible which forced her to leave school for the following semester. This experience of failure quickly led to an evaluation for and diagnosis of ADHD: Predominately Inattentive Type along with an Adjustment Disorder with Mixed Anxiety and Depression.

During the following summer, Megan re-enrolled at the university and passed classes while simultaneously meeting with her coach who helped her with time management and study skills. Her academic eligibility was restored which allowed her to return for the fall of her junior year and enroll in the coaching study. That fall, her personal coaching goals included academic success (staying current with her assignments, and study more effectively), health improvements (nutri-

tion, exercise, and hygiene), balance between social activities and academics, and reducing her level of dependence on her parents.

At one point, Megan noticed her reclusive habits forming - a signal that she might start repeating negative patterns that caused her difficulty in the past, and through discussions with her coach, she join a jazz dance group which increased both her social contact and physical activities. She used coaching sessions to learn to map out daily plans to specify work periods for assignments. She learned to use a weekly to-do list and calendars with target dates for long term assignments. She elected to have daily email accountability with her coach to ensure she followed her plans. Her GPA for the fall semester was a 2.9, a dramatic improvement, and she was pleased with her progress. Most of all, she saw herself becoming more self-reliant, she required less contact with her parents, and she learned to use resources available to her.

Happily, Megan began spring semester of her junior year with a network of friends, activities she enjoyed, and confidence in her ability to succeed academically. She began planning out both short- and long-term assignments independently, as well as that of her own daily schedule. The focus of weekly coaching sessions were to help Megan develop more efficient study strategies, and to obtain therapy for issues around perfectionism and overreactions to problems and setbacks. Eventually, she petitioned to academic advising to retroactively remove from her transcript the failing grades from the previous year. Megan's account of her earlier struggles and the subsequent progress she made convinced the dean to approve her request. This encouraged Megan to work even harder academically and by the end of the semester she received one B+ and four As, earning her a 3.8 GPA.

After the completion of the coaching study, Megan continued intermittent coaching during her senior year as she faced more challenging classes and approached graduation. She ultimately graduated with a cumulative 3.2 GPA and was hired by a multi-national corporation in the Pacific Northwest, thousands of miles from home, a dream job she had held since childhood. She contacted a psychiatrist in advance of moving to make sure she had access to medication, and got the names of coaches and therapists in case she wanted support during the transition.

This once dependent young woman moved after graduation, excited to face an adventure that neither

she nor her parents thought she would ever have the confidence or skills to handle. Megan acknowledged that the crisis which led to her diagnosis ultimately put her on the road to success. She credits coaching as the pivotal factor that developed her self-awareness and self-management, increased self-confidence and improved goal setting and planning skills necessary to deliberately live her life.

Discussion

This work supports the claim that coaching holds promise as a service that helps students with ADHD/LD develop better executive functioning and self-determination skills needed for success in college and in life. Working with coaches helped students to think more critically and flexibly to deal with problems, and helped them engage in sustained behaviors that moved them closer to their goals. Coaching also helped students better manage their emotions, daily stress, and distractions, factors that might otherwise derail their motivation and persistence.

Although this is a small study, it is unique in the growing body of coaching literature due to its inclusion of graduate students and an overall participant pool with relatively diverse racial/ethnic backgrounds and diverse diagnoses. Similar studies have either focused exclusively on undergraduates diagnosed with ADHD/LD or failed to report the participants' racial/ethnic characteristics, or comorbid conditions.

According to the three surveys given, students who voluntarily requested coaching possessed more academic risk factors than did the comparison group. This implies, perhaps, that students must reach a point when their difficulties reach a certain threshold which becomes the catalyst for determining that help is necessary. The push must indeed be a forceful one considering that this group, a group that typically displays patterns of inability to maintain commitments, chose to commit to an entire year of being held accountable to a coach. The treatment group consisted of diverse students with complicated needs and, in many cases, a history of needing other types of supports. Yet, they persisted with coaching and ultimately created more structured and manageable lives, increased their selfawareness and -acceptance, and often enhanced their communication abilities and self-advocacy skills.

In summary, college students with ADHD/LD can greatly benefit from coaching services, a vastly

different intervention than the didactic models offered on most college campuses. While students can and do benefit from tutoring, or from assistance aimed at refining their learning strategies, these interventions are not designed to foster growth in executive functioning and self-determination skills. This study showed how coaching helped students take control of their lives by clarifying and setting their own goals, developing realistic plans, and evaluating their progress toward goal attainment. This growth occurred as coaches helped students increase their capacity to self-manage academic, social, and emotional aspects of their lives. Based on this and other studies, it is recommended that service providers in colleges offer individual or group coaching as an adjunct to their already existing services or refer students to outside coaches. By providing coaching to students with ADHD/LD, postsecondary institutions may be able to increase the retention and graduation rates of a growing segment of students.

Limitations

Findings from this small study of university-based coaching services must be viewed within the context of several limitations. First, despite ongoing recruitment efforts, participation rates were limited and produced relatively small sample sizes. The small sample sizes limited the possibility of seeing significant findings in the quantitative data. Second, the study's most informative findings emerge from the qualitative interviews and while these interviews produced thick descriptions of student experiences with coaching services, such findings cannot be generalized to other settings. Additionally, the qualitative data is also limited due to a lack of any collateral observations from significant others in the students' lives. Finally, ethical considerations precluded the researchers' ability to deny coaching services to students who requested them. Consequently, the use of a self-selected participant pool further limited what could be concluded from the comparison of participants who were and were not coached. It is recommended that future research use randomized control groups, larger sample sizes, longitudinal data, and instruments that accurately measure executive functioning, self-determination, and academic success for college students.

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