Executive Function Coaching for College Students with Disabilities: A Systematic Literature Review

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Abstract

The number of students with disabilities (SWD) enrolling in postsecondary education continues to increase, yet degree completion rates continue to fall behind compared to peers without disabilities. There is an obvious need to investigate interventions to support postsecondary success so SWD can reap the benefits of a college education. Empirical evidence demonstrates that coaching is a promising support. This literature review aims to examine coaching interventions currently used to support SWD in postsecondary education. The authors reviewed relevant literature from 2009 to 2021 and identified 17 studies that met the search criteria. Findings indicate positive outcomes, including improved grade point average (GPA), time management, organization, learning and study skills, self-esteem, behavioral regulation, metacognition, and sense of well-being. The authors also include recommendations for additional research.

Keywords: postsecondary education, disability, coaching, academic success, higher education

Enrollment rates of students with disabilities (SWD) in postsecondary education continue to rise, currently comprising 19.4% of undergraduates (U.S. Department of Education, 2021). According to a report from the National Longitudinal Transition Study-2 (NLTS2), 44% of SWD were enrolled in 2-year colleges, 32% were enrolled in vocational schools, and 19% were enrolled in 4-year universities (Newman et al., 2011). Often, students do not reveal disability status for reasons such as fear of stigma, perceived lack of usefulness of services, and poor self-advocacy skills (Lyman et al., 2016; Smith et al., 2021), so enrollment rates are potentially much higher. Despite this rise in enrollment, SWD demonstrate poor academic success and persistence towards degree completion compared to peers without disabilities (Cortiella & Horowitz, 2014; Marino et al., 2020; Madaus et al., 2021). Completion rates for SWD were only 34% compared to 51% for students without disabilities (Newman et al., 2011). Students with disabilities are more likely to be underprepared with skills such as organization, planning, and study strategies needed for success (D'Alessio & Banerjee, 2016; Parker & Boutelle, 2009).

Supports Available for Students

Postsecondary institutions support SWD through the Office of Disability Services (ODS) if a student self-discloses their disability along with appropriate documentation (Singh, 2019). Typical supports are symptom-based accommodations derived from an identified diagnosis (Zeng et al., 2018) and include additional time for exams and assignments, distraction-reduced rooms for testing, assistance with note taking, environmental accommodations, and attendance accommodations (Smith et al., 2021). Although these accommodations can be beneficial, they are deficit-based and do not view students through a holistic, individualized lens. The deficit-based mindset emphasizes deficiencies in academic skills and cognitive abilities which can undermine a student's overall self-esteem, ultimately hindering growth by overshadowing their strengths. Students are required to identify as disabled, an expectation that can create increased levels of anxiety, distress (Woolf & de Bie, 2022) potentially leading to delays in meeting student needs (Lightfoot et al., 2018).

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Researchers have identified several factors contributing to postsecondary persistence that are not accounted for during the traditional accommodation processes including increased social demands (Prevatt & Levrini, 2015) and adjusting to the increased independence and complexity in postsecondary environments (Ardell et al., 2016; Lombardi et al., 2016). Students experience a decrease in structure and adult support as they transition out of the home setting (O'Rourke et al., 2020). In addition, executive function (EF) deficits are a prevalent symptom in many disabilities (Leung et al., 2016; Rabinovici et al., 2015; Zelazo, 2020; Zeng, 2018) and affect problem-solving, decision making, and purposeful behavior all of which are necessary for academic and life success. If accommodations are only deficit-based and not geared toward the development of EF skills, SWD will have minimal chance of developing the level of self-regulated learning required for academic success (Parker & Boutelle, 2009).

Executive Function and Self-Regulated Learning

Executive function (EF) skills form a foundation for knowledge attainment and control over the related purposeful behavior required for creating and reaching self-determined goals (Doebel, 2020; Rabinovici et al., 2015; Zelazo et al., 2016). Development of these skills are based on experience as individuals grow from childhood to adulthood (Diamond, 2013; Zelazo et al., 2016) and can be learned with positive guidance. Executive function skills are necessary for SWD to navigate college life through planning, organizing, staying on-task, maintaining schedules, and positive relationships. Academic success, health and wellness, and quality of life have been predicted with EF measures (Zelazo et al., 2016), and stronger EF skills are related to improved mental and physical health (Diamond, 2013).

Students entering university environments require higher self-regulation and self-directed learning levels than in secondary school (Anastopoulos et al., 2018). Zimmerman (2015) postulated that self-regulated learning is an interaction between intrinsic and extrinsic factors. Intrinsic factors include motivation, thought processes in planning, initiation, self-understanding, ability to regulate, self-monitor, and evaluate self. Extrinsic factors include the environment and social supports within that environment. Zimmerman (2002) noted that self-regulation is a proactive process involving an individual's feelings, thoughts, and motivations for goal attainment. A high level of self-awareness is required to adjust when strategies work or do not work when learning. Self-regulation also involves self-efficacy and the belief that one can accomplish their goals. Research indicates a correlation between higher levels of EF and efficacious self-regulated learning (Follmer & Sperling, 2016; Rutherford et al., 2018). Therefore, holistic scaffolds are required for students to develop self-regulated learning.

Completing a college education is associated with higher lifetime earnings, increased employment opportunities, improved access to healthcare benefits and preventative care, and improved quality of life (Ma et al., 2016; Trostel, 2015). From a holistic perspective, contextual supports should be analyzed along with academic supports for SWD as individual goals are heavily influenced by an individual's physical, social, and cultural environment (Law et al., 1996; Zeng et al., 2018). Recognizing the increased need for support, some institutions have begun implementing novel supports such as mentoring (Dunn et al., 2018; Lindsay et al., 2016) and coaching programs (Marino et al., 2020; Richman et al., 2014). Research indicates coaching can assist SWD during postsecondary education to enhance EF skills, increase self-awareness, and develop techniques to reach self-determined goal areas (Goudreau & Knight, 2018; Parker & Boutelle, 2009).

Coaching

Coaching in education as defined by van Nieuwerburgh (2012) is "A one-to-one conversation that focuses on the enhancement of learning and development through increasing self-awareness and a sense of personal responsibility, where the coach facilitates the self-directed learning of the coachee through questioning, active listening, and appropriate challenge in a supportive and encouraging climate" (p.17). Individuals require an inherent awareness of motivations, beliefs, and self-understanding to regulate their learning process (Boekaerts & Corno, 2005). The individual's context and environment can help or hinder the use and development of self-regulation. Each person will implement these skills differently according to the situations placed in front of them at various times. The collaborative coaching relationship allows students to focus on contextual, academic, and occupational needs for optimal performance in the postsecondary environment.

Purpose of the Present Study

This article describes a systematic review to evaluate the current evidence on coaching interventions for executive dysfunction for undergraduate students with disabilities. The intents of this systematic literature review are to (a) synthesize components of coaching interventions that address EF skills for undergraduate SWD, (b) understand the experiences

of undergraduates with disabilities in coaching programs, and (c) highlight areas for future research. The guidelines provided by the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) were used to ensure transparency and accuracy in reporting (Page et al., 2021).

Method

A search was conducted using the online databases Google Scholar, PsycINFO, and ERIC using a combination of the following keywords "executive function" and "students with disabilities" or "ADHD" or "learning disability" or "ASD" or "traumatic brain injury" or "emotional and psychiatric conditions," and "undergraduate" or "college" or "post-secondary," and "coaching."

Criteria for inclusion were empirical studies published in peer-reviewed journals between 2009-2021 that (a) used qualitative, quantitative, or mixed methods; (b) included postsecondary students diagnosed with disabilities; (c) included coaching or mentoring as an intervention; (d) used at least one dependent variable identified as EF skills or outcomes associated with EF skills; and (e) was published in the English language. Studies were excluded if they were program evaluations, conference proceedings, dissertations, or theses. Reference lists from articles meeting inclusionary criteria were also examined to identify additional publications.

The search yielded 863 articles. All abstracts were reviewed for evidence of inclusionary criteria. A total of 23 articles met the criteria. All abstracts were read by two authors. Interrater reliability was calculated by dividing the number of agreements by the number of agreements plus the number of disagreements multiplied by 100% and was 82.14%. Disagreements were discussed and agreements obtained for a total number of 17 articles (see Table 1) to be included in this review.

Results

Study and Participant Characteristics

Of the 17 articles meeting inclusionary criteria for this review, various research designs were employed. Three of the studies utilized qualitative designs (Harrington et al., 2021; Parker et al., 2013; Parker & Boutelle, 2009), two were exploratory in nature (Bellman et al., 2015; Rando et al., 2016), three made use of longitudinal designs (Anastopoulos et al., 2020; DuPaul et al., 2017; Weiss & Rohland, 2015), four used mixed methods (Marino et al., 2020; Parker et al., 2011; Richman et al., 2014; Xie, 2020), one used a prospective descriptive design (Prevatt & Yelland, 2015), one used a case study comparison design (Kennedy & Krause, 2011), one was quasi-experimental (Anastopoulos & King, 2015), and two employed randomized controlled trails (Anastopoulos et al., 2021; Field et al., 2013). Sample sizes ranged from 2 to 1,782, and ages of students ranged from 17-60 years old, although eight of the articles did not report specific ages (Bellman et al., 2015; Field et al., 2013; Marino et al., 2020; Parker & Boutelle, 2009; Parker et al., 2011; Parker et al., 2013; Richman et al., 2014; Weiss & Rohland, 2015).

Six of the articles did not report socio-demographics of the participants (Field et al., 2013; Kennedy & Krause, 2011; Parker & Boutelle, 2009; Parker et al., 2011; Parker et al., 2013; Weiss & Rohland, 2015) and the remaining studies reported the majority of participants were Caucasian. All studies except for one, which only collected data from male participants (Kennedy & Krause, 2011), reported a mix of both male and female participants. Two investigations noted students demonstrated EF deficits but did not specify disability type (Marino et al., 2020; Xie, 2020), of the remaining investigations, two focused on ASD (Rando et al., 2016; Weiss & Rohland, 2015), one included a population of TBI (Kennedy & Krause, 2011), four focused on ADHD and LD (DuPaul et al., 2017; Parker & Boutelle, 2009; Prevatt & Yelland, 2015; Richman et al., 2014), six studies investigated primarily ADHD (Anastopoulos & King, 2015; Anastopoulos et al., 2021, Anastopoulos et al., 2020; Field et al., 2013; Parker et al., 2011; Parker et al., 2013), and two investigated a variety of diagnoses (Bellman et al., 2015; Harrington et al., 2020).

Study Outcomes

Within the 17 studies examining coaching for postsecondary students with disabilities, a variety of models with different combinations of length of program, training for coaches, and frameworks were used. Marino et al. (2020) performed a matched-pairs experimental design with 120 undergraduate STEM majors with EF deficits within the framework of Universal Design for Learning (UDL). Participants received coaching from graduate students who were enrolled in a special education program and who received training and supervision about coaching best practices, EF, evidence-based practices in STEM, and UDL from their secondary methods instructor. Coaching plans and goals were developed within a personalized UDL lesson plan and each participant received an average of eight coaching sessions within one semester. In addition, participants met with STEM mentors virtually or face-to-face on average three times per semester.

Table 1

Summary of Literature

Study	Methodology	Participants	Intervention Characteristics	Results
Parker & Boutelle (2009)	Qualitative phenomenological	7 students (ADHD, LD)	Formally trained coaches, EF coaching available for free to all students up to 1hr/week	Improved self-awareness, EF skills and ability to attain goals, well-being and decreased anxiety
Parker et al. (2011)	Mixed methods	7 students (ADHD)	Formally trained coaches, 10-weekly 30 min. phone sessions	Improvements in goal attainment, positive sense of well-being and decreased stress, increased self-regulation and self-control, and improved confidence
Kennedy & Krause (2011)	Case study comparison	2 (TBI)	2 semesters, about 1 hour per week	Improvements on graded assignments, student reports of increased use of strategies (e.g., time management, organization) and positive academic decisions
Field et al. (2013)	Randomized controlled trial	127 (ADHD) (88 intervention / 39 comparison)	Formally trained coaches, 6 months/30 min. telephone sessions	Improved EF skills, self-regulation, self-talk, time management
Parker et al. (2013)	Qualitative	19 (ADHD)	Formally trained coaches, weekly 30-min.,between session check-in	Improved self-regulation, time management, well-being
Richman et al. (2014)	Mixed methods (with non-equivalent comparison group)	24 (ADHD/LD) (16 intervention/8 comparison)	Formally trained coaches, 12-24 sessions over two semesters	Improved self-awareness, self-management, and well-being
Anastopoulos & King (2015)	Quasi-experimental	40 (ADHD)	Group CBT and mentoring with mentors who have background in psychology, 8 weeks followed by maintenance phase in subsequent semester	Improved ADHD knowledge and symptoms, behavioral strategies, adaptive thinking, and EF skills, increased use of campus resources
Bellman et al. (2015)	Exploratory survey	41 (variety of diagnoses), includes survey results from 16	Formally trained coach, services offered for academic year	Increased self-confidence, motivation, improved study skills, improved time management, stress management, organization

Study	Methodology	Participants	Intervention Characteristics	Results
Prevatt & Yelland (2015)	Prospective descriptive	148 (ADHD/ LD)	Combined cognitive-behavioral therapy and psychoeducational techniques, 8 sessions/1x per week. Coaches trained and participated as part of practicum and supervised by doctoral level psychologist and master's level school psychologist	Improved learning strategies, self-esteem, decrease emotional distress and increased satisfaction with school and work.
Weiss & Rohland (2015)	Longitudinal	23 (ASD)	Specific communication coaching program including disability counseling, communication coaching, peer coaching, social groups, and campus resources. Length of participation was for two semesters	Results specific to communication coaching: improvement in EF planning/function, improvement in social communication, ability to budget time, keep schedules, and complete assignments
Rando et al. (2016)	Exploratory	11 (ASD)	Transition coach (peer) model student employees served as coaches, allowed up to 10 hour/week, ended up being approximately one hour/day 5 days/ week, bi-weekly support group available post-skill development	Improved GPA, retention, decrease in behavioral incidences, high levels of program satisfaction
DuPaul et al. (2017)	Longitudinal	1782 (ADHD / LD)	Formally-trained coaches	Total hours of coaching had positive relationship with GPA
Anastopoulos et al. (2020)	Longitudinal	88 (ADHD)	Mentoring in combination with CBT group sessions, maintenance phase-1-2 booster CBT sessions, 4-6 mentoring sessions. Mentoring provided by trained graduate students in doctoral-level psychology, post-doc in clinical psychology, doctoral-level psychologists	Improved EF, ADHD symptoms, behavioral regulation, metacognition, use of disability support services, decreased symptoms of anxiety and depression, and increase in number of credit hours taken by participants
Marino et al. (2020)	A Mixed-methods, matched-pairs experimental design	120 undergraduate STEM majors with executive function deficits (60 intervention/60 control)	Semester long coaching, average 8-weeks, graduate students majoring in special education served as coaches	Higher GPA, increased STEM persistence Use of graduate student in special education to serve as coaches reduced costs of program

Study	Methodology	Participants	Intervention Characteristics	Results
Kie (2020)	Mixed methods	7 (with and without disabilities all presented with challenges in EF skills)	6 weeks of coaching through mobile application (WhatsApp) and between session check-ins	Improved EF and learning strategies/skills
Anastopoulos et al. (2021)	Randomized controlled trial	250 (ADHD)	Group CBT and mentoring, provided by graduate student research assistants	Improved ADHD symptoms, EF skills, use of disability accommodations
Harrington et al. (2021)	Qualitative phenomenological	18 (variety of diagnoses, ADHD most common)	Occupational therapy-led coaching sessions (10-12) provided by occupational therapy students as part of level II fieldwork under supervision of registered occupational therapist	Improved study habits, time management, communication, processing, grades, improved healthy living habits.

Note. EF=executive function; STEM=science, technology, engineering, mathematics; ADHD=attention deficit hyperactivity disorder; LD=learning disabilities; ASD=autism spectrum disorder; CBT=cognitive behavioral therapy; GPA=grade point average.

Results indicated significantly higher scores in GPA for the treatment group compared to the control group, increased persistence in STEM major, and participants identified the flexibility based on the principals of UDL was beneficial to the coaching process. In addition, the particular design of using graduate students as coaches significantly reduced overall costs of the program compared to others.

Xie (2020) also investigated undergraduate STEM majors using mixed methodology with seven students, 43% with disabilities and 57% without disabilities, using mobile EF coaching with WhatsApp. The researcher served as the coach in this study providing six weeks of coaching using the Self-Determination Learning Model of Instruction to set goals and a digital calendar for time-management and organization. Results indicated improvements in EF including time management, organization, goal setting, and learning strategies/study skills. In addition, participants identified the value of an individualized approach used through a mobile application as beneficial and noted decreased stress and increased self-awareness.

Bellman and colleagues (2015) explored the impact of coaching on the success of 41 postsecondary SWD pursuing STEM degrees through the *AccessSTEM* initiative. Services were provided in-person by a certified coach with over 10 years of experience and participants also received between session communication through email or phone calls. Results from post-intervention surveys suggested improved EF skills (e.g., time-management, organization, planning), motivation, and confidence.

Parker and Boutelle (2009) investigated coaching for students with ADHD and LD through phenomenological methodology. The research was conducted at Landmark College, a postsecondary institute specifically designed to serve students with ADHD and learning disorders. Coaching is offered to all students as a part of the tuition and fees package. All coaches are employed by the university and formally trained through the International Coaching Federation. The seven students in this study received 10-weekly sessions of EF coaching and then participated in interviews about their experiences. Themes discovered included increased participant self-determination and ability to attain goals, improved well-being and decreased anxiety, and improved self-regulation and EF skills.

Additional research was completed with the population at Landmark College in a longitudinal study over five years (DuPaul et al., 2017). Researchers not only analyzed coaching available to students, but also several services available to students in this specialized university setting, including tutoring, coaching, and academic advising. Findings showed more hours

of services were associated with better outcomes. Regarding coaching, students with ADHD benefitted more than students with LD, however both populations outcomes showed increased hours of coaching had a positive relationship with increase in GPA.

Parker et al. (2011) explored the impact of coaching utilizing a mixed methods study designs with seven students who had a diagnosis of ADHD. Coaches in this study were formally trained through the Edge Foundation which is specifically designed to provide EF coaching (Edge Foundation, 2022). Participants received 10-weekly 30-minute phone sessions as well as between sessions communication with coaches through text, email, or phone calls. Post-intervention data revealed increased GPA, improved self-regulation and decreased stress, improved ability to attain goals and self-confidence. An additional qualitative study analyzing the outcomes of coaching for participants with ADHD also revealed positive results (Parker et al., 2013). Coaches were trained and supervised in the strengths-based ADHD coaching approach (Sleeper-Triplett, 2010) and provided weekly 30-minute phone call sessions. Outcomes included improved self-regulation, time management, persistence, and confidence.

Field et al. (2013) also analyzed a coaching program with formally trained coaches through the Edge Foundation. The researchers conducted a randomized controlled study with 127 students who had a diagnosis of ADHD. Participants received 30-minute weekly sessions for 24 weeks via phone calls in addition to between session check-ins by email or phone. The intervention group demonstrated improved scores on the Learning and Study Strategies Inventory (LASSI), a self-report assessment of learning and study strategies related to skill, will, and self-regulation. Total scores increased pre-post with statistical significance ($p < .01$) and large effect size ($d = 1.02$). Improvements were also noted in cluster scores: Skill ($t = 7.63$, $df = 78$, $p < .01$; d=.88), Will ($t = 6.11$, $df = 78$, $p < .01$; d =.65), and Self-Regulation ($t = 9.13$, $df = 78$, $p < .01$; d =1.10). In addition, participants noted improved self-regulation, time management, and self-talk.

Richman et al. (2014) used a mixed methods study design to understand the impact of coaching on EF and self-determination skills that support academic and life success. Coaches were formally trained, and the 24 participants had diagnoses of ADHD and/or LD. Participants received 6-12 sessions for 30-minutes in-person or on the phone. Quantitative outcomes were not significant, however most participants in the intervention group demonstrated improvements in post-test measures of self-determination, EF, and learning strategies. Qualitative findings from six participants noted increased self-awareness, ability to manage life, improved self-advocacy skills, and well-being.

Two research studies focused specifically on undergraduates with a diagnosis of ASD who were provided increased supports compared to coaching programs discussed thus far. Rando et al. (2016) used a peer transition coach model known as Raiders on the Autism Spectrum Excelling (RASE) with 11 participants who received approximately five-hours per week of coaching. Coaches were hired as student employees and completed a training process supervised by the assistant director of disability services. The program included the UDL framework and coaches were trained to use various modalities to address learner variability. After completion of one semester of coaching, students participated in less structured meetings and were able to attend a bi-weekly support group for students with ASD. Further support, if warranted, included a meeting to determine additional steps necessary for success with the office of disability services, students, and family member(s). Study outcomes indicated increased GPA, retention rates, decreased behavioral incidences, and overall high levels of participant satisfaction.

Weiss & Rohland (2015) analyzed outcomes of the Communication Coaching Program (CCP) for 23 postsecondary students diagnosed with ASD. This holistic program included disability counseling, communication coaching, peer coaching, social groups, and campus resources. Graduate students from the Department of Communication Disorders served as communication coaches, and peer coaches were supervised undergraduate students. Both received regular supervision from clinical supervisors to ensure treatment fidelity. The average amount of participation in CCP was for two semesters including one to two hours of communication coaching per week and meetings away from the clinic setting with peer coaches to increase generalization of skills learned. Investigation results specific to communication coaching included improved EF skills (e.g., maintaining calendars time management), goal planning, and social-communication skills.

An additional form of coaching investigated was occupational therapy (OT)-led coaching through the Greater Opportunity for Academic Learning and Living Successes (GOALS2) program offered to SWD in a university setting (Harrington et al., 2021). Occupational therapy students completing Level II fieldwork supervised by a registered OT served as coaches and met with participants approximately 10-12 times for the duration of the program. Coaching consisted of a strengths-based approach including individual-

ized academic, health and wellness, and interpersonal relationship goal areas. Phenomenological analysis revealed improved healthy living habits, time management, organization, study skills, and grades. Participants also reported the benefits of safe, open communication with coaches that allowed for engagement and accountability increased self-perceptions of overall academic and social success.

Kennedy & Krause (2011) explored a dynamic coaching model with two college students who were 10 and 14 months post-TBI. Coaching was provided by certified speech-language pathologists with experience in cognitive rehabilitation. Students received two semesters of individualized coaching for approximately one hour per week focused on metacognitive awareness through the use of principles and practices of self-regulated learning. The Functional Assessment of Verbal reasoning and Executive Strategies (FAVRES) assesses EF accuracy and rationale during challenging, functional activities. Post-intervention Student One demonstrated improvements in speed but no significant changes were noted in accuracy or rationale; Student Two demonstrated improvements in speed but declined in accuracy. Improvements were noted in the areas of grades, self-awareness, and use of self-regulation strategies.

Four studies examined coaching using a cognitive behavioral therapy (CBT) and psychoeducational approach (Anastopoulos & King, 2015; Anastopoulos et al., 2020; Anastopoulos et al., 2021; Prevatt & Yelland, 2015). The specific program ACCESS (Accessing Campus Connections and Empowering Student Success) developed by Anastopoulos & King (2015) used mentoring in addition to CBT. The terms coaching and mentoring are often used synonymously although the terms differ as mentoring refers to sharing specific knowledge and coaching refers to guidance based on the coachee's specific goals (van Nieuwerburgh & Barr, 2017). The research studies authored by Anastopolous et al. met inclusionary criteria because the studies included specific EF outcomes and based on the description of mentoring within the ACCESS program: " Mentors help students develop realistic goals, monitor their follow-through on achieving those goals, and provide students with ongoing support and personal coaching" (p.145). An open clinical trial revealed significant improvements ($p < .001$) in the EF skills of metacognition ($d = 0.86$), behavioral regulation ($d = 0.74$), and global EF ($d = 0.88$) (Anastopoulos & King, 2015). In a similar study medium effect sizes were found in metacognition ($d =$ 0.64, 0.53) and behavioral regulation ($d =$0.66, 0.58) in both active treatment and maintenances phases (Anastopoulos et al., 2020). Additionally, results from a randomized controlled trial demonstrated significant improvements in EF skills of behavioral regulation and metacognition in the immediate treatment ACCESS group compared to the delayed treatment control group (Anastopoulos et al., 2021).

In a prospective descriptive study evaluating outcomes of students with a diagnosis of ADHD over a five-year period, coaches were doctoral-level practicum students supervised by a doctoral-level licensed psychologist and master's level school psychologist (Prevatt & Yelland, 2015). Participants received individual coaching sessions one time per week for eight weeks total and received between session assignments to assist with progress towards goal areas. Results indicated improvements in self-esteem as measured by the Rosenberg Self-Esteem Inventory (RSE) ($p <$ .01) with medium effect size ($d = 0.43$) and significant improvements on all 10 subscales (skill, will, and self-regulation) of the LASSI ($p < .01$) with effect sizes ranging from ($d = .40$ to .89).

Discussion

The purpose of this review was to examine how coaching interventions support EF skills and contribute to academic success of postsecondary students with disabilities. The analysis of research completed between 2009-2021 revealed different variations in the frequency, nature, and mode of coaching programs employed at postsecondary institutions. First, coaching services were provided by either certified coaches or informally trained coaches with the benefit of cost reduction noted as justification for informally trained coaches. Second, the models used to guide coaching practices varied and included Universal Design for Learning (Marino et al., 2020; Rando et al., 2016), Self-Determination Learning Model of Instruction (Xie, 2020), EF coaching tailored specifically for persons diagnosed with ADHD (Field et al., 2013; Parker et al., 2011), strengths-based approach within OT model of delivery (Harrington, 2021), dynamic coaching model through speech-language pathologist lens (Weiss & Rohland, 2015), and CBT psychoeducational approach (Anastopoulos & King, 2015; Anastopoulos et al., 2020; Anastopoulos et al., 2021; Prevatt & Yelland, 2015). Third, service delivery including the amount of time and method (in-person or virtual) varied between programs; programs ranged from eight weeks to two full semesters and sessions were between 30- and 60-minutes each with some including between session check-ins/assignments.

Despite the variations in program frequency, nature, and mode, the majority of coaching interventions had a positive impact on student success. Positive

outcomes include improved GPA, time management, organization, learning and study skills, self-esteem, behavioral regulation, metacognition, and sense of well-being.

Limitations and Future Research

This review has several limitations. First, generalizability of the findings may be limited due to small sample sizes and lack of population heterogeneity within most studies. In addition, search terms, and inclusion and exclusion criteria may have limited discovery of all relevant articles. For example, different search terms may have revealed additional research studies, or criteria requiring outcomes associated with EF skills may have eliminated articles in which EF skills were not clearly defined. Third, due to the variations in research methodologies, variations in types of disabilities studied, and small number of studies discovered the quality of research proves to be difficult to evaluate.

Madaus et al. (2020) noted the difficulty associated with special education research in postsecondary education due to many factors including individual differences in students being studied, variations in types of institutions (e.g., public vs. private, two-year vs. four-year) and supports available. In addition, there is a lack of quality indicators and standards available for researchers who conduct studies about SWD and postsecondary education. The authors suggest research guidelines including well-defined descriptions of study samples, locations, and methodologies. Of the articles included in this review, 35% did not report socio-demographics and 11% did not specify disability type, which increased difficulty in generalizing findings and replicating studies. Future research would benefit from following the guidelines outlined for increased consistency, methodological rigor, and overall quality of research regarding SWD in postsecondary education.

Conclusion

Enrollment rates of SWD in postsecondary education continue to rise, yet retention and degree completion rates are lower compared to peers without disabilities (Cortiella & Horowitz, 2014; Marino et al., 2020; Madaus et al., 2021). This systematic literature review provides an update on extant coaching interventions on EF skills imperative for academic and life success. Although the studies differed in nature, frequency, and mode of programs the overall outcomes were positive including improved GPA, time management, organization, learning and study skills, self-esteem, behavioral regulation, metacognition, and sense of well-being.

Coaching is a collaborative, client-centered process (Parker et al., 2018; Richman et al., 2014) tailored to meet individualized student needs. As such, coaching interventions have the ability to holistically address EF skills in every area of life. The results of current research demonstrate coaching can be an effective and low-cost intervention for helping SWD succeed. Considering the favorable research results, one could contend coaching supports should be made available at no-cost to those who seek services.

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