

College Students and ADHD: Effective Treatments

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Introduction

Among college students, 5% have been diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) as reported by Prevatt (2016). Students with ADHD can present with many symptoms of inattention, such as difficulty focusing or struggling to complete homework (Prevatt & Young, 2014). College students are less likely to present with disruptive or hyperactive symptoms, but can still be easily distracted in learning environments (Prevatt & Young, 2014).

To better understand the effects of ADHD in college, Prevatt also reported that “Only 9.1% of individuals who display ADHD in young adulthood graduate from college, compared to 60.6% of the non-ADHD control group” (2016). During college, students with ADHD have difficulty with testing, time management, and even social life (Prevatt, 2016). Thus, college students with ADHD can be at risk for a variety of issues, and some may seek help for their symptoms (Prevatt, 2016).

What effective treatment options exist for college students diagnosed with ADHD? This review will provide an overview of current treatments available for college students diagnosed with ADHD, with a special focus on treatments and issues that could be addressed in the context of a college counseling center. However, although medication is discussed briefly, this review will focus more on treatments that can be accomplished by a counselor, who cannot prescribe medication.

Literature Search Process

To find articles for this review, searches were conducted through the Milligan College library website, which uses EBSCOhost. For articles not immediately available, full texts were obtained through inter-library loans, and were considered against inclusion and exclusion

criteria. To limit the search, articles had to be peer-reviewed and written between 2009 and 2019. Search terms included “college”, “ADHD”, and “treatment.” Inclusion criteria consisted of a primary focus on either treatment for ADHD or a discussion of the intersection of college and ADHD. Although not every study focused specifically on college students, all studies included represented ages that could be seen on a college campus. After finding 23 articles to review, those chosen for this review included 2 Randomized Controlled Trials (RCTs), 4 literature reviews, and 4 empirical experiments. Both the RCTs and the empirical experiments focused specifically on treatment, although one study was an audit of past treatment. However, the literature reviews were more mixed, with one focusing on diagnosing ADHD during college and the others discussing possible treatments and reviewing literature on said treatments for ADHD.

Exclusion criteria significantly narrowed the search for relevant literature. As previously mentioned, peer-reviewed and recently written articles were used. However, much of the broader literature focused on ADHD during adolescence or childhood. Among the 23 articles previously mentioned, some focused on college students feigning ADHD to gain medication, which did not answer the research question for this review. One study initially considered was excluded due to a poor sample size of only four participants.

In Appendix A, the reader can find the annotated bibliography providing brief summaries of the articles discussed above. One term to know is Cognitive Behavioral Therapy (CBT), which is a common theory of therapy that was studied in multiple articles. Additionally, coaching is a form of treating ADHD, and has some theoretical ties to CBT.

Conclusions

This review’s aim was to find relevant studies that discussed effective treatments for college students diagnosed with ADHD. Throughout the articles chosen, research was presented

on a variety of treatments, each with their own level of effectiveness for reducing ADHD symptomology. Some of the symptoms addressed included level of inattention (Anastopoulos et al., 2015), level of hyperactivity (Dittner et al., 2018), spatial memory (Gropper et al., 2014), and task completion (Prevatt et al., 2017).

Table Description

In Table 1, 6 studies were shown that provided information on effective treatment for ADHD. These studies were chosen because of their experimental design, 2 of which were the RCTs. It must be noted that one study focusing on task completion rate had a relatively small effectiveness, although it did produce slightly higher scores than the control group (Prevatt et al., 2017). Furthermore, one study simply performed an audit of past students receiving treatment, but it does provide an example of how college students may be referred or treated when diagnosed with ADHD (Amyx et al., 2015). Nevertheless, this table offers a way to compare the effectiveness of different studies and treatment options, as well as noting the medication compliance rate for college students, which may be an issue dealt with in some counseling settings (Gray et al., 2018).

Two studies overlapped in measuring inattention. Notably, both studies used CBT and both achieved a measure of effectiveness in producing results, and one of these designs was an RCT. Regarding levels of inattention, the authors of one study found that clients had decreased levels of inattention when participating in a type of CBT called Accessing Campus Connections and Empowering Student Success (ACCESS) which moderately to significantly reduced levels of inattention (Anastopoulos et al., 2015). In the RCT design, clients receiving CBT achieved better symptom reduction than the control group, as illustrated in the table (Dittner et al., 2018).

Table 1

Outcomes of interventions for ADHD in college students

References	Sample	Measure of ADHD	Methods	Outcomes
Amyx et al., (2015).	25 males, 19 females. 19-29 years old. Student population.	ADHD Self-Report Scale	Retrospective audit of student health, treatment, and referrals for students diagnosed with ADHD.	>80% of sample received medication. 45% of sample referred to counseling.
Anastopoulos et al., (2015).	16 males, 27 females. 17-27 years old. Student population.	DSM IV Criteria; Self-Report; ADHD Rating Scale	Clients assigned to CBT/ACCESS groups. Clients received a pre-test and post-test, which rated inattentive and hyperactive-impulsive symptoms.	Clients' symptom scores of inattention dropped significantly (Cohen's $d = 0.76$). Clients' symptom scores of hyperactive-impulsivity showed a small decrease (Cohen's $d = 0.31$).
Dittner et al., (2018).	41 males, 29 females. Mean age was 35.7 – 36.1 years for both groups. Not student population.	Diagnosis of ADHD (Childhood onset) by a mental health professional; Adult Barkley Current Symptom Scale	RCT – one group assigned to TAU, one group assigned to TAU plus 15 CBT sessions over 30 weeks.	Symptoms of hyperactivity and inattention were 8.8 points lower than control, as rated by CSS. (ES = -1.81).
Gray et al., (2018).	22 males, 29 females. Mean age was 19.08 +/- 1.32 years. Student population.	Diagnosis of ADHD (no further description given)	Compared in-transition students to post-transition students. Clients had 4 visits during a semester, where pills were counted, and had a bottle that tracked medication compliance.	In-transition students adhered to medication 30.46 - 58.35% of the time compared to post-transition students at 44.55-65.09%. Medication compliance was highest for both groups at midterms.
Gropper et al., (2014).	21 males, 41 females. 19-52 years old. Student population.	Documentation from college disability services of ADHD diagnosis; Adult ADHD Self-Report Scale.	Clients randomized into control or Working Memory (WM) training group, and were tested on auditory-verbal and visual-spatial WM.	Clients that received WM training scored 47% more improvement on spatial memory testing than those in the control group.
Prevatt et al., (2017).	17 males, 17 females. 18-50 years old. Student population.	Confirmed ADHD diagnosis; self-report symptom checklist.	Clients attended individual ADHD coaching sessions over 8 weeks, using incentives or consequences for task completion.	Tasks with incentives or consequences had a completion rate of 67.39% compared to 58.09% without incentives or consequences. (Cohen's $d = 0.24$).

Note. ADHD = Attention Deficit Hyperactivity Disorder. CBT = Cognitive Behavioral Therapy. ACCESS = Accessing Campus Connections and Empowering Student Success. RCT = Randomized Controlled Trial. TAU = Treatment As Usual (medication). CSS = Current Symptoms Scale. WM = Working Memory.

Applications

As the research points towards possible effective treatments for ADHD, one area for application would be in college counseling centers. As many of the treatments described in the table could be applied in such contexts, these treatments would offer a way to reduce specific symptoms among this population. This research suggests that college students with ADHD can seek help at a counseling center and reduce symptoms, which may produce better participation in college, both academically and socially.

Strengths and Limitations

The studies in this review encompassed a variety of quantitative studies and literature reviews, as discussed in the section on the literature search. Indeed, one area that may be lacking includes the field of qualitative studies, and could perhaps benefit from case studies that can closely examine the efficacy of treatments for this population. Another limitation came from studies using a wide variety of methods with which to measure ADHD, ranging from simply requiring a diagnosis to using self-reported symptoms. Although ADHD is a widely known diagnosis to the general public, future literature may want to focus on more unity in tools to measure ADHD symptoms. Further areas for improvement also could include more focus on racial and ethnic differences in treatment for ADHD, as well as gender differences. For example, these might be excellent avenues for case studies to examine how students of minority status experience care when diagnosed with ADHD.

Currently, much of the literature focuses on treatment that includes or assumes the use of medication to treat ADHD. Some studies focused specifically on the aspects of medication (Amyx et al., 2015) while others compared use of medication to a form of treatment that included medication and therapy (Dittner et al., 2018). Nevertheless, none of the studies focused

on effectiveness of any treatment without any medication, and this may be an avenue for further exploration.

However, I found many strengths in the studies I reviewed. For example, a program like ACCESS could hypothetically be integrated into similar college counseling centers in the future, although its 8-week schedule may not work with every college's semester scheduling (Anastopoulos et al., 2015). At the same time, that same study would require training and possibly financial expenses that not every college counseling center could afford. However, many counselors are at least familiar with the basics of CBT, and could perhaps more integrate that into their sessions to help reduce inattentive symptoms (Dittner et al., 2018). Although that study did not specifically focus on a population currently enrolled in college, the study included a variety of ages and could still be beneficial for college students.

From the literature, some suggestions for future research included a greater need for experiments with control groups (Anastopoulos et al., 2015). Furthermore, some studies may warrant another trial with a larger sample (Dittner et al., 2018). Additionally, studying characteristics of the therapist administering the treatment may also be beneficial in further examining cause and effect for ADHD treatment (Prevatt et al., 2017).

Keeping both these limitations and strengths in mind, counselors working with this population may want to integrate some treatments, such as CBT or coaching, with their clients diagnosed with ADHD. Furthermore, research found shows that clients may not always consistently adhere to medications (Gray et al., 2018). This may be an area where counselors could assist clients to better adhere to their medication schedule. In conclusion, a variety of treatments exist that can co-occur with medication to treat college students diagnosed with

ADHD. By using such treatments, counselors and students can work together to lower symptoms of ADHD.

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APPENDIX A

Ahmann, E., Tuttle, L. J., Saviet, M., & Wright, S. D. (2018).

In this article, the authors provide an overview of the current literature of research for using coaching for college students with ADHD. This article provides helpful descriptions of what this coaching might look like, as well as overall trends in the literature about coaching. It includes a variety of research designs, including randomized controlled trials. However, one weakness is that many of the authors practice ADHD coaching, which they acknowledged as a possible bias in their paper.

Amyx, M. L., Hastings, K. B., Reynolds, E. J., Weakley, J. A., Dinkel, S., & Patzel, B. (2015).

This article examines the medical care for college students with ADHD, specifically directed at Nurse Practitioners and the use of medication for the patients. This study retrospectively examined students' adherence to ADHD-medication. This paper helps to detail the context and details of ADHD-medication, while also illustrating how to better serve clients with ADHD.

Anastopoulos, A. D., & King, K. A. (2015).

This study examined the effects of cognitive-behavior therapy on college students with ADHD. They treated college students from the same university and administered a pre-test and a post-test. However, they did not have a control group. Nevertheless, this research fits well with the demographics I want to study.

Dittner, A. J., Hodsoll, J., Rimes, K. A., Russell, A. J., & Chalder, T. (2018).

This recent study offers several advantages: it fits into a common theme of the literature, which is using cognitive-behavioral therapy for ADHD. It also was a randomized controlled trial with 60 participants, randomly assigned to treatment as usual, or treatment

as usual with CBT. The trial indicated that treatment as usual with CBT offers more benefits than the control group. Although this study include college-aged adults, it did not solely focus on college-aged adults.

Fleming, A. P., & McMahon, R. J. (2012).

This article previews a literature review on etiology and treatment of ADHD, specifically among college students. Although it is not an experiment, it offers a helpful framework and an overview of current treatment for ADHD. It focuses on helping college students who are dyliving with ADHD.

Gray, W. N., Kavookjian, J., Shapiro, S. K., Wagoner, S. T., Schaefer, M. R., Resmini

Rawlinson, A., & Hinnant, J. B. (2018).

This study tracked medication adherence among a specific group of college students diagnosed with ADHD, with the findings that only 53% of the students took their medicine as prescribed. As this study did not have a control group in this design, they concluded that college students with ADHD may need more assistance to adhere to medication. One limitation is that they seemed to assume that medication was the best treatment option for college students with ADHD.

Gropper, R. J., Gotlieb, H., Kronitz, R., & Tannock, R. (2014).

In this randomized control trial, students with ADHD were assigned either to a control group or a group with memory training. The study showed that memory training led to reduction of ADHD symptoms. This article illustrates another example of possible effective treatment for students with college students. However, a limitation is that this was not a blind study, as students were aware of their group placement.

Prevatt, F. (2016). \

This article provides an overview of coaching for college students with ADHD. Its main usefulness is its in-depth description of the process and reasoning behind coaching.

However, this cannot help statistically as it provides more education than research.

Prevatt, F., Smith, S. M., Diers, S., Marshall, D., Coleman, J., Valler, E., & Miller, N. (2017).

In this study, a group of 34 college students underwent 8 weeks of ADHD coaching, using self-rating and Likert scales to weekly check in on their progress. The benefit of this study to my research is more real-world example of what ADHD coaching might look like if implemented on a college campus counseling center. The main liability is that there was no control group.

Prevatt, F., & Young, J. L. (2014).

In this article, the authors overview current treatments for college students with ADHD, including coaching and cognitive-behavioral therapy. They also include a legal overview of the college's responsibilities. Again, the limitation here is that they do not conduct an experiment.