

K-8 TEACHERS' EXPERIENCES INSTRUCTING STUDENTS DIAGNOSED WITH ADHD:
A PHENOMENOLOGICAL STUDY

by

Van Carll Kirchhoff

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

Liberty University

2023

K-8 TEACHERS' EXPERIENCES INSTRUCTING STUDENTS DIAGNOSED WITH ADHD:
A PHENOMENOLOGICAL STUDY

by Van Carll Kirchhoff

A Dissertation Presented in Partial Fulfillment
Of the Requirements for the Degree
Doctor of Philosophy

Liberty University, Lynchburg, VA

2023

APPROVED BY:

Katelynn Wheeler, PhD, Committee Chair

Rachel Hernandez, EdD, Committee Member

Abstract

The purpose of this phenomenological study was to describe the lived experiences of teachers who have experience working with students diagnosed with ADHD in the K-8 public school system in the Mid-Atlantic United States. The problem is that the number of students diagnosed with ADHD is rapidly increasing, and yet, educators are not being provided with the knowledge or the skills to support these students in the classroom (Dort et al., 2020). Due to the large percentage of students diagnosed with ADHD, research is needed to provide insight into what methods are being used by teachers in an inclusive classroom to enhance classroom management and to help these students with their learning. The study's central question is: What are the lived experiences of K-8 teachers who have experience educating students diagnosed with ADHD? Expectancy Value Theory (EVT) guided the study. The study used a qualitative design, and data was collected in the form of journal prompts, individual interviews, and two focus groups. All data was transcribed, examined, in vivo, open coded, and placed into themes that developed during the research. The findings of the study showed that formal training in ADHD and support techniques for students diagnosed with ADHD is severely lacking. It also revealed how crucial it is for teachers to make a connection with these students to help them to live up to their potential. Finally, medication was shown to be a strong support method that should not be arbitrarily dismissed when given under proper medical supervision.

Keywords: medicated, Attention-deficit/hyperactivity disorder, Ritalin, Adderall, behavior modification

Copyright Page

Copyright 2023, Van Carl Kirchhoff

Dedication

I dedicate this dissertation to my mother, who always shows caring and compassion to those in need.

Acknowledgments

I would like to acknowledge all my past Liberty teachers who helped guide me during this long but worthwhile endeavor. Special thanks to Dr. Wheeler, my committee chair, for all her help with topic ideas, online cohort meetings, and so many edits to make the final dissertation draft possible. Dr. Hernandez, my committee member, thank you for all your advice throughout this process and for all your questions.

Table of Contents

Abstract	3
Copyright Page.....	4
Dedication	5
Acknowledgments.....	6
Table of Contents	7
List of Abbreviations	13
CHAPTER ONE: INTRODUCTION.....	14
Overview.....	14
Background.....	14
Historical Context.....	15
Social Context.....	18
Theoretical Context.....	19
Problem Statement.....	20
Purpose Statement.....	21
Significance of the Study	21
Theoretical Significance	21
Empirical Significance.....	22
Practical Significance.....	22
Research Questions.....	23
Central Research Question.....	23
Sub-Question One.....	23
Sub-Question Two	23

Sub-Question Three	23
Definitions.....	23
Summary.....	24
CHAPTER TWO: LITERATURE REVIEW.....	26
Overview.....	26
Theoretical Framework.....	26
Related Literature.....	28
Causes of ADHD	29
Identifying Students with ADHD	30
Medication and Behavioral Treatment for ADHD	33
K-8 Teachers' Knowledge and Attitudes Surrounding ADHD	37
Professional Development	42
Classroom Management.....	46
School Laws Pertaining to Students Diagnosed with ADHD.....	51
Positive Parent-Teacher Relationships	53
Summary	54
CHAPTER THREE: METHODS.....	56
Overview.....	56
Research Design.....	56
Research Questions.....	57
Central Research Question.....	57
Sub-Question One.....	57
Sub-Question Two	58

Sub-Question Three	58
Setting and Participants.....	58
Setting.....	58
Participants.....	59
Researcher Positionality.....	60
Interpretive Framework	60
Philosophical Assumptions.....	60
Researcher’s Role	62
Procedures.....	62
Permissions	62
Recruitment Plan.....	63
Data Collection Plan	63
Journal Prompts Data Collection Approach	64
Individual Interviews Data Collection Approach	65
Focus Groups Data Collection Approach	69
Trustworthiness.....	70
Credibility	70
Transferability.....	71
Dependability	71
Confirmability.....	71
Ethical Considerations	72
Summary.....	72
CHAPTER FOUR: FINDINGS.....	73

	10
Overview.....	73
Participants.....	73
Mary.....	74
Laura.....	75
Carrie.....	76
Ellen.....	77
Beth.....	78
Erin.....	79
Carol.....	80
Marsha.....	81
Jan.....	82
Alice.....	83
Results.....	84
Lack of Training.....	85
Connection.....	87
Medication as a Last Resort.....	90
Research Question Responses.....	92
Central Research Question.....	92
Sub-Question One.....	93
Sub-Question Two.....	94
Sub-Question Three.....	95
Summary.....	96
CHAPTER FIVE: CONCLUSION.....	98

	11
Overview.....	98
Discussion.....	98
Interpretation of Findings	99
Implications for Policy and Practice.....	101
Theoretical and Empirical Implications.....	103
Limitations and Delimitations.....	105
Recommendations for Future Research.....	107
Conclusion	108
References.....	110
Appendix A.....	134
IRB Approval Letter	134
Appendix B.....	136
Social Media Recruitment Letter.....	136
Appendix C.....	137
Consent	137
Appendix D.....	140
Journal Prompts	140
Appendix E.....	141
Individual Interview Questions.....	141
Appendix F.....	143
Focus Group Questions.....	143

List of Tables

Table 1. Teacher Participant Information	70
Table 2. Themes and Sub-themes.....	73

List of Abbreviations

American Academy of Pediatrics (AAP)

Attention Deficit Disorder (ADD)

Attention Deficit Hyperactivity Disorder (ADHD)

Center for Disease Control (CDC)

Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD)

Diagnostic and Statistical Manual, 5th Edition (DSM-TR)

English for Speakers of Other Languages (ESOL)

Individualized Service Plan (ISP)

CHAPTER ONE: INTRODUCTION

Overview

Teachers play a key role in the development of students in their classroom. The predisposed viewpoints of teachers who have students with learning disorders, such as attention deficit hyperactivity disorder (ADHD), may have a profound effect on the education and learning potential of those students (Lawrence et al., 2017). According to Metzger and Hamilton (2021), negative teacher viewpoints of students with ADHD may result in low appraisals of these students. Teachers are also inclined to rate students diagnosed with ADHD as performing below grade-level in math and reading (Metzger & Hamilton, 2021). Results from their study also revealed that teachers would be less likely to see students with ADHD as advanced for their age in both math and reading.

The purpose of this phenomenological study is to describe the perspectives of teachers who have experience working with students diagnosed with ADHD in the K-8 public school system. Chapter one will provide information on the historical, social, and theoretical concepts to provide a contextual background for the research. Included in chapter one is also the problem statement, purpose statement, and the significance of the study. Keywords are defined and research questions are introduced before the chapter summary gives a review of the intended research study. This study is critical to the continuing exploration of how students diagnosed with ADHD are best educated within an inclusive classroom.

Background

In the United States, the percentage of students ages 4 to 17 who are diagnosed as having ADHD has been steadily increasing in the past two decades (Xu et al., 2018). This increasing twenty-year trend of students diagnosed with ADHD, from a nationwide, cross-sectional,

population-based survey had estimates of 6.1% in 1997-1998 to an increased percentage of 10.2% in 2015-2016 (Center for Disease Control (CDC), 2022). The reasons for this increase are not well known and more research is needed to conclude if it is from a greater quantity of testing, an actual rise in the prevalence of ADHD, or a combination of the two (Chaplin, 2018). Students with ADHD are also reported to have other disorders, such as 52% also having a behavior or conduct problem and 33% having anxiety (Center for Disease Control (CDC), 2022). K-8 children are typically treated with either medication or behavioral treatment. Behavioral treatment has a higher percentage with younger children, ages 2-5, while older children, ages 6-17, have high percentages of combination treatments of both medication and behavioral therapy. In total, 77% of children with ADHD, ages 2-17, are receiving treatment (Danielson et al., 2018).

Students diagnosed with ADHD have a greater risk of academic failure, school refusal, and grade repetition (Martin, 2014). They have varied supports through medication and adjustments made by teachers, such as a short walk when classroom frustrations start to rise too high (Frondelius et al., 2019). Unfortunately, schools have seen increased substance abuse in students who receive late stage, age 10 and older, medication therapy for ADHD (McCabe et al., 2016). Schools are required to document medication management, increasing risk of lawsuits, for an ever-increasing rate of chronic conditions in children, ADHD and asthma being the most common (Maughan et al., 2018). These records include information on medication administration errors, typically a missed dose, wrong time, or dose, but 11.2% of the time they recorded the wrong medication being given to the student (Maughan et al., 2018).

Historical Context

Educators and scientists alike have been grappling with the issues associated with children diagnosed with, and possibly medicated for ADHD. Examples, of what may be ADHD

or a related disorder, are given by Sir Alexander Crichton in 1798 and by German physician Heinrich Hoffman in 1844. Crichton gave a short description of some patients who had an incapacity to focus on one object and an inattention in tasks or play activities (Lange et al., 2010). Hoffman even created a character called “Fidgety Phil”, who is popular today as a parable for kids with ADHD (Lange et al., 2010). This ailment may go back even further since, “children presenting with symptoms of inattention, hyperactivity, and impulsivity have previously been described by several authors during the last 200 years” (Lange et al., 2010, p. 241).

Descriptions of children with a form of hyperactivity that went beyond average characteristics, were expanded upon in the 19th century. John Haslam, in a case described in his book *Observations on Madness and Melancholy*, gave an example of a child so uncontrollable that he was a terror to his family from the age of two and could not conform to school teachings from instructors well-known for their discipline and patience (Kos & Richdale, 2004). The 19th century was also turning into a time when compulsory education laws demanded the education of children, typically in a sit and listen environment, for long periods of time (Harper, 2016). What is now known as ADHD was first described by George Still, a pediatrician, who in 1901 presented case studies on children, 20 in number, who had problems with inattention and overactivity (Kos & Richdale, 2004). George Still went on to describe manifestations, in early school years, of children with behavior that was non-responsive to punishment, mostly occurring in boys, oppositional, yet not thought to be due to undesirable social conditions. These children were believed to suffer from a morbid physical condition affecting their brain in one of three ways. The subgroups of hyperactive behavior that Still defined were subjects with provable serious lesions of the brain, those with a range of severe diseases or wounds that develop into brain injury, and subjects with hyperactive behaviors that are not ascribed to any established

source (Sandberg, 1996). In his 20 cases revolving around subjects without physical disease or injury, Still detected 15 cases of boys and five cases of girls that he did not believe was a coincidence (Still, 2006).

In the 20th century, clinicians questioned if brain damage was the only root cause of hyperactivity in children. Charles Bradley, in 1937, noticed that children who were given Benzedrine for a headache were also showing improvements in their conduct and studying. His finding led to the use of dexamphetamine and methylphenidate, also known, and marketed as Ritalin, in the medication of hyperactivity in children (Bradley, 1937). Brain damage also started to be seen as an improper assumption for this affliction and an official term of minimal brain dysfunction (MDB) was the replacement used in the early 1960s (Kos & Richdale, 2004). Hyperactivity, the disorder known as hyperkinetic reaction of childhood, was included in the DSM-II, *Diagnostic and Statistical Manual of Mental Disorders*, in 1968. This terminology was the forerunner of the terms ADD/ADHD, which were defined in the next DSM edition.

Assessment by questionnaires were also developed to help diagnose children with the disorder and were given to teachers and parents in the form of a rating scale. Virginia Douglas, of McGill University, started a focus on inattention as the underlying symptom with and without hyperactivity, hence the term attention deficit disorder (ADD) was defined in DSM-III, with publication in 1980 (Kos & Richdale, 2004). Further updates were made to remove the subgroups and renamed the disorder “Attention Deficit-Hyperactivity Disorder (ADHD)” in 1987 (Lange et al., 2010). DSM-IV listed three types of ADHD: mostly inattentive; mostly hyperactive and impulsive; and a combined type that includes all three symptoms. These symptoms were also recognized as not going away in adulthood. DSM-V changed the types of the disorder into three presentations that can change over time and affect people in different

ways (Center for Disease Control (CDC), 2022).

Social Context

Students diagnosed with ADHD can present many challenges in the classroom, including for the teacher, for the student themselves, and to other classmates. Children with ADHD, who are medicated, are typically a part of an inclusive classroom and may need extra assistance daily (Center for Disease Control (CDC), 2022). Non-profit organizations like Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD), founded in 1987, are available to provide evidence-based information on ADHD. They also provide courses by teachers and for teachers, with information on instructional strategies and managing emotional and behavioral challenges (CHADD, 2022). The perspectives and experiences of teachers who work with students who are medicated, such as those with ADHD, can contribute towards the overall knowledge of best practices with these students. Teacher confidence in the classroom has been shown to have a positive correlation as their training related to teaching students with ADHD increased (Bekle, 2004).

Current information on students who are medicated is especially critical due to the massive increase in ADHD diagnoses. As previously stated, 1 in 10 students aged 4-17 is now diagnosed with ADHD (Xu et al., 2018). The American Academy of Pediatrics (AAP) endorses teacher-administered behavior therapy for children with ADHD (Center for Disease Control (CDC), 2022). Behavioral classroom management has been shown to be constructive by increasing positive behaviors, decreasing negative behaviors, and increasing academic engagement. Although it has been shown to work with children of all ages, it has limited real world testing in mostly elementary school environments, hence more use and testing is necessary for continued progress (Evans et al., 2014).

Students who lack knowledgeable and experienced teachers, who can help to guide them through their formal school education, may have continued challenges upon reaching adulthood. A Swedish study found that “Individuals with ADHD had annually on average 17 percent lower income, 12.19 more days of unemployment, and a higher likelihood of receiving disability pension, compared to controls” (Jangmo et al., 2021, p. 1). This will have a large impact on society and national economies if a significant number of children continue to have ADHD as adults. This was shown to be the case by a study that reported 60% of children with ADHD then demonstrated symptom persistence as adults while “41% met both symptom and impairment criteria in adulthood” (Sibley et al., 2017, p. 2).

Theoretical Context

Teachers are extremely important to the success of students in their classrooms (Ekstam et al., 2017). Teachers who are properly trained to handle the variables of an inclusive classroom can also increase student achievement and overall school atmosphere (Ekstam et al., 2017). The beliefs and experiences of teachers help to shape their teaching methods, instructional efficacy, and student engagement (Bandura, 1993; Lazarides et al., 2018).

Although children with ADHD respond to behavioral reinforcement, “There is strong evidence indicating that ADHD symptoms affect learning of non-social information and may also interfere with adequate learning of social and emotional information” (Parke et al., 2021, p. 519).

In a meta-analysis of social cognition in people aged 8-36 years old with ADHD, social cognition was found to be significantly impaired in comparison with healthy controls (Bora & Pantelis, 2016). Russell Barkley, a clinical psychologist who specializes in ADHD, has stated that consequences must be swift and powerful for students with ADHD (Barkley, 2008). Barkley

notes that, “Children with ADHD must be held more publicly accountable for their behavior and goal attainment than other children” (Barkley, 2008, p. 8). Instead of medication, it may be more productive and beneficial for students to have positive and negative behavioral reinforcement in the classroom. Researchers have shown that using both positive and negative reinforcement for children with ADHD is effective in producing on-task behavior, increasing academic performance, and lowering overactivity (Kos et al., 2006). Behavioral modification has also been successfully used by mentoring programs to decrease hyperactivity and inattention in both primary and middle school at-risk students (Marino et al., 2021).

Problem Statement

The problem is that the number of students diagnosed with ADHD is rapidly increasing, and yet, educators are not being provided with the knowledge or the skills to support these students in the classroom (Dort et al., 2020). Teacher knowledge of ADHD has even been shown to be lacking and have a foundation of false information (Banerjee, 2013). Even teacher participation in knowledge-based training sessions does not appear to make a significant difference in effective classroom management (Moore et al., 2017). The beliefs and experiences that teachers of students with ADHD possess can be enlightening, not only in the behavioral strategies they use but also as confirmation on the need for medication from their observations (Sluiter et al., 2019). Furthermore, medicating these students may be covering up a symptom and not digging down into the true treatment that is needed. The medication may harm students in long-term ways such as future substance addiction and related behavioral problems from side-effects of the medication (Wienen et al., 2019). More research into what teachers have discovered about their students with ADHD and how they handle classroom management is needed.

Purpose Statement

The purpose of this phenomenological study is to describe the lived experiences of teachers who have experience working with students diagnosed with ADHD in the K-8 public school system in the Mid-Atlantic United States. At this stage in the research, teachers' lived experiences will be generally defined as past and present productive methods used for more practical classroom management during instruction of students with ADHD in an inclusive classroom. The population for this study will be teachers of students with ADHD in inclusive K-8 public school classrooms.

Significance of the Study

The study is significant by filling a gap in the research that provides teachers with the knowledge and tools needed to best instruct the increasing numbers of students diagnosed with ADHD. The thoughts and feelings of these teachers, and their lived experiences, while instructing students with ADHD is not clearly known and analyzed. A phenomenological study was chosen to gain a better understanding of a certain environment through the experiences of the participants (Creswell & Poth, 2018).

This research may assist other teachers in maximizing learning and motivation in all students by adopting the useful behavior control techniques employed by the teachers in this study. If this is the case, the practical significance of the study will help school districts nationwide. Administrators and teachers in other school districts can use the practical lessons learned to enhance their own behavioral management programs and in turn help their students and teachers. Administrators may use the findings to help shape inclusive classroom management in future policy.

Theoretical Significance

Teachers supporting students diagnosed with ADHD may have a wide range of beliefs and experiences that influence their instruction of these students (Bekle, 2004). Since it is estimated that 95% of students diagnosed with ADHD can achieve greater levels of learning, the methods of instruction used to support these students may make a critical difference in their academic progress (Barkley, 2006; Bekle, 2004). Teachers who believe they can make a difference in a student's performance have been shown to be the most effective (Reid, 1994). Therefore, the beliefs and experiences of teachers who are supporting students diagnosed with ADHD can have a significant impact on their students overall formal education (Fabiano et al., 2009).

Empirical Significance

This research will add to the literature due to the methodological approach used in the study. Research suggests that teachers who know little about ADHD and do not have the proper training or experience will use less than effective instruction methods and classroom management techniques (Flower et al., 2016). Researchers have shown that teachers with a foundation of knowledge about ADHD will show greater ability to effectively train students diagnosed with ADHD and manage their inclusive classroom (Ward et al., 2022).

Practical Significance

By discovering the experiences of teachers who support students diagnosed with ADHD, researchers may be able to develop updated best methods for use in the classroom. This study will also provide a deep look into the beliefs of teachers in inclusive classrooms which may help to show any similarities or differences in beliefs between different subgroups of teachers. These beliefs can possibly provide insights into changes that may be needed in either general or special education training programs. The results of the study can also spur further research or changes in

teacher professional development programs and support systems for these teachers by the school district.

Research Questions

The research questions were created to help the participants to express their thoughts, feelings, and experiences while teaching students who have been diagnosed with ADHD in an inclusive classroom.

Central Research Question

What are the lived experiences of K-8 teachers who have experience educating students who are diagnosed with ADHD?

Sub-Question One

How do teachers decide which strategies to implement while educating students who are diagnosed with ADHD?

Sub-Question Two

How have the trainings provided to K-8 teachers informed their instruction of educating students with ADHD?

Sub-Question Three

How do teachers of students diagnosed with ADHD feel that medication impacts the student's academic success?

Definitions

1. *Adderall* – Adderall is a central nervous system stimulant made from a combination of dextroamphetamine and amphetamine, used to treat ADD, ADHD, and narcolepsy (MedlinePlus, 2022).

2. *At-risk* – At-risk refers to students who have a higher probability of poor performance and potentially failing at school (Soneson et al., 2020).
3. *Attention deficit hyperactivity disorder (ADHD)* – ADHD is defined as a neurodevelopmental disorder of childhood with main symptoms being hyperactivity or trouble paying attention (Center for Disease Control (CDC), 2022).
4. *Lived experiences* – Lived experiences refers to personal, first-hand knowledge gained through direct involvement (Moustakas, 1994).
5. *Medicalization* – Medicalization refers to making a nonmedical condition into a new disease or illness (Conrad & Potter, 2000).
6. *Phenomenological Study* - “A phenomenological study describes the common meaning for several individuals of their lived experiences of a concept or a phenomenon” (Creswell & Poth, 2018, p. 75).
7. *Ritalin* – Ritalin is a central nervous system stimulant, generic name methylphenidate, used to treat ADD, ADHD, and narcolepsy (MedlinePlus, 2022).

Summary

Even though ADHD is the most common neurobehavioral disorder in children, no definitive neurological cause has been found (Gesser-Edelsburg & Hamade Boukai, 2019). The current methods of treating students with ADHD include both medication and behavior strategies in the classroom. Little is known about the long-term effects of medication on these young students and yet the percentage of students on medication continues to increase (Center for Disease Control (CDC), 2022). As the number of students diagnosed with ADHD rapidly increases, educators are not being provided with the knowledge or the skills to support these students in the classroom (Dort et al., 2020). Specific behavior strategies that are used by

teachers are also not well documented. A range of techniques are often mentioned as suggestions, but an understanding of what works best in real world situations is needed. This study will aim to provide examples of what works best through the experiences of teachers who support these students who are diagnosed with ADHD. Teachers spend more time with students than almost any other person in the student's life and yet according to Lee (2014), they have very little decision-making say regarding ADHD policy. This transcendental phenomenological study will be designed to fill a gap in the literature about teachers' beliefs, experiences, and best practices employed during instruction of students with ADHD in an inclusive classroom.

CHAPTER TWO: LITERATURE REVIEW

Overview

Teachers harbor many misconceptions about ADHD (Kikas & Timoštšuk, 2016), resulting in difficulties within the classroom. These misconceptions are due to a lack of teacher knowledge regarding students with special needs, as well as a lack of knowledge about how to effectively manage these needs in the classroom (Kikas & Timoštšuk, 2016). Hearing success stories from teachers who have experience working with students with special needs, such as ADHD, can be a boost to moral and performance, especially for inexperienced teachers (Park & Park, 2017). Additional knowledge concerning working with students who have been diagnosed with ADHD will enable teachers to have a better grasp of how to support students who are suffering from this disorder (Chaves et al., 2021).

Chapter two of the study provides an overview of the theoretical framework used in the study along with related literature. The theoretical framework is the expectancy-value theory that defines the connection between an individual's expectancy for success in completing a goal along with the value of the achievement (Wigfield & Eccles, 1992). The related literature gives an overview of the causes and methods used to identify students who may later be diagnosed with ADHD, school resources available to help these students, and teacher beliefs about these students. Chapter two also includes a summary, which describes the challenges and needs for more research in these areas.

Theoretical Framework

Expectancy-value theory, developed by Allan Wigfield and Jacquelynne Eccles, provides the appropriate structure for the research (Wigfield & Eccles, 1992). Expectancy-value theory comprises both how highly someone values a goal and how much they are willing to sacrifice to

achieve that goal in a current situation (Thatcher Day, 2021). Using expectancy-value theory as the theoretical framework for insight into teachers' beliefs and practices in an inclusive classroom, containing students diagnosed with ADHD, may assist in developing an understanding of how best to work on problems that arise in this environment (Abrami et al., 2004).

The theory claims that one's motivation to achieve an objective is a combination of a person's expectations and a subjective value assigned to the task. For example, if a teacher believes they will succeed in teaching students diagnosed with ADHD and designates a high value to this task, then it will positively influence the teacher's chances of success (Thatcher Day, 2021). Expectancy and value are the two central components in the theory.

Expectancy-value theory uses a model that further breaks down value into four sub-components. The first subcomponent, attainment value, is focused on the internal importance that a teacher will assign to doing well on the task. Teachers that have apathy towards their current role in the school will score low in attainment value compared to a teacher who has great pride in doing well. Intrinsic value, the next sub-component of value, is the amount of personal satisfaction obtained from the task. The third sub-component of value, utility value, has a significantly higher value when there is a clear vision that the activity will be beneficial to future goals (Wigfield & Eccles, 1992). This subcomponent places more value on the long-term benefits of a task instead of having a short-term outlook. The last sub-component is cost, which compares the sacrifices that must be made for the activity in relation to other goals that compete in terms of time and resources. As an example, a teacher may find that attending a workshop on classroom management will conflict with socializing with friends and family.

Expectancy-value theory can help clarify how a teacher's beliefs and views will influence decision making in the classroom (Thatcher Day, 2021). Teachers may perceive students diagnosed with ADHD as having a high cost of instruction due to a greater chance of class disruptions, problems with interactions among peers, and other potential conditions that co-exist along with the ADHD diagnosis. Additionally, the learning disorders that are commonly associated with ADHD, as well as anxiety and depression, can significantly impact the chances of success in school for students diagnosed with ADHD (Ohan et al., 2008). These factors may also make teachers of these children feel more stressed and develop a negative viewpoint on chances of instructional success, or lower value in terms of expectancy-value theory, during their interaction time in the classroom (Greene et al., 2002). The potential for negative expectations from teachers is concerning since there is evidence that negative expectations from teachers can increase the likelihood of the manifestation of those expectations in their students (McKown & Weinstein, 2008).

Related Literature

ADHD is one of the most common and controversial mental health conditions affecting children today (Center for Disease Control (CDC), 2022). There is a tremendous amount of research on the medication for ADHD, as well as the problems that arise with students diagnosed with ADHD in inclusive classrooms (Bolinger et al., 2020). Despite this research, best practices for supporting students diagnosed with ADHD have not been established. In this section, descriptions covering what researchers have to say about the identification of students with ADHD, medication and behavioral treatment for ADHD, the medication management and documentation that is required for schools to complete, teacher knowledge and attitudes

pertaining to ADHD, teacher preparation programs, and academic success of students diagnosed with ADHD will be included.

Causes of ADHD

Teachers in general have doubts about ADHD originating from a biological or neurological cause. In many cases, the idea of a diet laced with sugar and preservatives was given as the reason for children's inattention and hyperactivity (Kern & Seabi, 2008). ADHD is a complex mental illness without an isolated cause. Instead, it is thought to be an interaction of many regions of the brain as a result of neurobiology, genetics, and environmental upbringing (Kieling et al., 2008). Environmental factors appear to play a less significant role than either neurobiology or genetics, but they may have a greater influence on how ADHD symptoms are expressed in the classroom (Banerjee, 2013). Family studies have shown a strong genetic link, in which there is a significant increase in a child being diagnosed with ADHD, when a parent has already been diagnosed with ADHD. This increase may be as high as 55% (Biederman et al., 1995). This percentage is even higher in studies of identical twins. Barkley (2006) reviewed studies of twins and found that the average heritability in identical twins was at least 80-90% whereas the risk of both fraternal twins inheriting ADHD from a parent with ADHD was not significantly higher than non-twin siblings (Barkley, 2006). Biological factors surrounding pregnancy and birth are most associated with a predisposition to ADHD. These factors may include toxemia, poor health of the mother, low birth weight, premature birth, and duration of labor (Mick et al., 2002). Children with low birth weight and premature birth have the highest percentage of being diagnosed with ADHD from all these factors, with an estimate of 13.8% of all ADHD cases in the US being linked to low birth weight (Mick et al., 2002). Previous studies suggest that ADHD is linked genetically, extremely inheritable, and even more likely when

combined with low birth weight (Rahman et al., 2021). Genetic risk factors now account for about 70% of the causes of ADHD (Kian et al., 2022). Studies on the genetic inheritability of ADHD also show evidence that parents with ADHD have a greater probability of having children with a more severe form of the condition (Kian et al., 2022). Genetics also play a role in a prenatal child's responses to environmental toxins. Underlying predispositions to environmental stresses have been linked to the development of ADHD, however, this gene-environment link has not been proven conclusively (Kian et al., 2022). Overall, ADHD is believed to be a genetically based hereditary disorder but there is still a lack of understanding in the exact mechanisms that contribute to the development of ADHD in children (Kian et al., 2022).

Identifying Students with ADHD

Diagnosing students who may have ADHD is not an exact science. Nevertheless, it is one of the most diagnosed conditions in childhood (Center for Disease Control (CDC), 2022). Data from a meta-analysis estimates that 5-7% of children in school have ADHD and are in need of treatment (Thomas et al., 2015). Since this data averages to one child per classroom, it is critical that students receive support, otherwise ADHD can lead to functional impairments along with negatively impacting the learning of the student, their classmates, and their teachers (DuPaul & Stoner, 2014).

Concluding that a child has ADHD is a multi-step process since there is no single test that has conclusive reliability to diagnose ADHD (Cabral et al., 2020). Furthermore, other issues such as anxiety or depression, may show similar symptoms to ADHD. Healthcare professionals use guidelines established by the American Psychiatric Association's Diagnostic and Statistical Manual, Fifth edition (DSM-5) as a reference in their diagnosis of ADHD (Center for Disease

Control (CDC), 2022). Children with ADHD will show a pattern, as the name suggests, of inattention and possibly also hyperactivity or impulsiveness that interferes with classroom learning or development. Both inattention and hyperactivity/impulsivity have six or more symptoms necessary, from a list of potential symptoms, to be diagnosed with ADHD. In addition to at least six symptoms in the inattention and/or hyperactivity/impulsivity sections, children must also have all the following conditions (Center for Disease Control (CDC), 2022):

- Several Symptoms of ADHD were present at a young age, typically before a child reaches 12 years.
- ADHD symptoms are present in at least two environments such as school and home.
- ADHD symptoms create a reduction in performance at school or work.
- The symptoms do not fit better with another mental disorder such as anxiety, dissociative, mood, or personality disorder. The symptoms happen outside of any schizophrenia or another psychotic disorder.

There are three different diagnoses of ADHD that may be given to children displaying symptoms of the disorder and these symptoms need to be expressed for at least the past 6 months (Chaplin, 2018). A child may have a combined diagnosis of ADHD if both inattention (ADD) and hyperactivity/impulsivity are displayed for at least 6 months. Otherwise, a more specific diagnosis of either predominantly inattentive or predominantly hyperactive/impulsive will be given if enough symptoms are displayed for either specific subcategory in the past 6 months (Center for Disease Control (CDC), 2022).

Richard Saul, MD, a behavioral neurologist, believes the symptoms of ADHD are real but that other health problems may cause those symptoms such as depression, lack of sleep, or sensory loss (Saul, 2014). Saul continues to cite those drugs, such as Ritalin and Adderall,

typically used to treat ADHD, can have serious side effects along with addiction and abuse. He feels that a combination of the medical community, advertisements, and pharmaceutical companies, along with parents and patients, have created a plague of misdiagnosed ADHD with serious consequences, including addiction to prescription medication (Saul, 2014). Cultures and ethnic groups with a lower tolerance for the behaviors associated with ADHD have also shown higher rates of ADHD diagnosed in children (Havey et al., 2005).

An electroencephalogram (EEG) has been used for over 80 years on ADHD studies due to the inexpensive cost and accessible information (Chen, Song, et al., 2019). The main goal is to establish the characteristics of an EEG of children with ADHD. So far, the predictive value of an EEG has been too unstable. The models had too much data that was sensitive to which region of the brain was the source of information (Chen, Chen, et al., 2019). Therefore, the usability as a diagnostic tool is typically compromised by low interpretability of the test.

Convolution neural networks (CNNs) have made tremendous progress as a signal processing method for the data generated from an EEG and have surpassed human abilities on some specific problems. CNNs are also helping to solve issues with identifying ADHD in children and one proposed framework achieved an accuracy of 94.67% on test data (Chen, Song, et al., 2019). While deep learning (DL) algorithms are still limited in their conclusive abilities, their use in analyzing data from neuroimaging tools, such as the EEG is growing and will help to confirm a diagnosis of ADHD (Cicek & Akan, 2021).

Continuous Performance Tests (CPTs) may be used to help validate a diagnosis of ADHD in children from healthy differentiating from healthy controls (Lev et al., 2022). Virtual Reality (VR) has helped these tests to improve their results and shows better test results between

ADHD and non-ADHD students. A combination of the two methods has shown a potential advantage of virtual reality in the diagnosis of ADHD (Rodríguez et al., 2018).

Functional near-infrared spectroscopy (fNIRS) has been shown to find significant differences in brain regions between children diagnosed with ADHD and a non-ADHD control group. Multivariate pattern analysis (MVPA) is then used to identify children who may have ADHD from the control group based on signals from the fNIRS (Gu et al., 2018). MVPA has better accuracy than univariate classification. The combination of fNIRS and MVPA has been shown to be a reliable method for identifying children with ADHD (Gu et al., 2018).

Although the only people officially qualified to diagnose a student with ADHD are mental health professionals such as a psychiatrist, pediatrician, or primary care provider, school professionals play an important role in the identification of ADHD (Barkley, 2006). Caregiver reports are a key instrument along with direct observations that become part of the overall diagnosis of a student. Since many of the symptoms of ADHD become manifest during classroom activities, when sitting in a chair or being quiet for long periods of time may be required, teacher observations during class time may give insights into the general disposition of the student being diagnosed for ADHD (Brock et al., 2009).

Medication and Behavioral Treatment for ADHD

ADHD receives a large amount of attention due to the rapid increase in diagnosis in children. ADHD is surrounded by hotly contested treatments (Kiely & Adesman, 2015). These treatments may be further complicated by biased sources that may include family, friends, and school personnel.

Fortunately, there is a foundation of work from the American Academy of Child and Adolescent Psychiatry that can be used to help with decisions about treatment. Treatment for

children is started with a detailed diagnosis of their ADHD diagnoses, along with any other comorbidities that are frequently associated with ADHD (Subcommittee on Attention-Deficit/Hyperactivity Disorder, Steering Committee on Quality Improvement and Management, 2011). Treatments may include pharmaceutical and behavioral treatments, depending on the level of the child's impairment and any family concerns about medication. Schools may not require that a student takes medication to be qualified for a special education program (*Protecting Students With Disabilities*, 2020), however, a family-centered approach that also includes school personnel is best regardless of the treatment plan.

Medication

Medication treatments for children diagnosed with ADHD have historically been based on psychostimulants such as amphetamines and methylphenidate, nonstimulant atomoxetine, and antidepressants (Lewis & Rudolph, 2014). The stimulants have a calming effect on children, which is the direct opposite reaction of their effect on most adults (Volkow et al., 2012). Psychostimulants are the most common treatment and can be further broken down into different classes being methylphenidate (Ritalin), dextroamphetamine (Dexedrine) (which is also used to treat narcolepsy), dextroamphetamine-amphetamine (Adderall XR), and lisdexamfetamine (Vyvanse) (Berman et al., 2009). The prescribed pharmaceutical will depend on the symptoms of the child along with their health history (CDC, 2022).

Benefits of medication on students diagnosed with ADHD are numerous and include a reduction in the core symptoms of ADHD, increased compliance, decreased aggression, increased test scores, and an improvement in grades (Chang et al., 2019; Lewis & Rudolph, 2014). Medication is now available that is long-lasting and has caused a shift towards doses that will medicate a student throughout the entire school day (Lewis & Rudolph, 2014). If a child does not react well to stimulant medication, then a non-stimulant medication such as atomoxetine

may be used that has similar efficacy in many cases (Hanwella et al., 2011). Atomoxetine is also recommended in many cases of students diagnosed with ADHD in which the students also possess other comorbidities, such as arrhythmias or cardiac abnormalities, that are contraindicated with stimulant medication (Hanwella et al., 2011).

Medication prescribed to students diagnosed with ADHD may also produce adverse effects in children (Berman et al., 2009). Two of the most common adverse side effects in children who take stimulant medication are jitteriness and withdrawal from social situations (Berman et al., 2009). Physical side effects from stimulant medications may also include headaches, problems sleeping, and loss of appetite (Wolraich et al., 2019). Reports on growth in adolescents who partake in stimulant treatment have shown a negative correlation that suggests stimulant treatment may result in a child not attaining their full potential height (Berman et al., 2009). These side effects may turn into a major public health issue since clinical guidelines for children in school are categorizing medication, especially stimulant medication, as the first treatment given to students diagnosed with ADHD (Chang et al., 2019). Due to the potential for negative side effects, many parents of young children are starting to question the short and long term effects of medication on their children and have initiated a renewed interest in behavioral treatments for children diagnosed with ADHD (Lewis & Rudolph, 2014).

Behavioral Treatments

Behavioral treatments involve teachers and parents establishing an environment that will improve the behavior of a child diagnosed with ADHD (Wolraich et al., 2019). Discovering what behavioral treatments may be best for these children can be difficult due to the diversity of the severity of ADHD, along with the potential comorbidities that may also be present (Wolraich et al., 2019). Behavioral treatment is preferred by many parents of preschool children either as the

only treatment or at least as the method used first (Lewis & Rudolph, 2014; Wolraich et al., 2019).

Behavioral treatment is supported as the best treatment for children younger than age 4 due to the lack of sufficient evidence for the effectiveness of other types of treatment at this age (Wolraich et al., 2019). As children enter elementary school, a combination of both behavioral treatments along with medication is often initiated due to a stronger effect on the core symptoms of ADHD (Wolraich et al., 2019).

There is minimal evidence suggesting that boys and girls will have different responses to behavioral treatments (Owens et al., 2018). In one study, girls had a more positive response to behavior treatment given by their parents than boys did (Lavigne et al., 2008). Fossum et al. (2009) reported the opposite response in a later study with boys responding better to behavioral treatment than girls. One possibility for the difference in conclusions is that boys, in general, are diagnosed with the combined disorder of having attention deficit and hyperactivity disorder, whereas girls are more inclined to represent only the attention deficit portion and not the hyperactive portion (Owens et al., 2018).

Children diagnosed with attention deficit (ADHD-I), the most common form of ADHD, are prone to process information more slowly and may have a less positive response to behavioral treatments (Adalio et al., 2018). Processing speed is like intelligence and is often tested by using the Wechsler intelligence test and subtests (Adalio et al., 2018). It consists of “the cognitive capacity to process information and generate an appropriate response within constrained time limits” (Adalio et al., 2018). Children were found to have a higher level of improvement in ADHD-I symptoms, by using behavioral therapy, when they also possessed a higher level of processing speed (Adalio et al., 2018).

Overall, behavioral therapy is a very positive treatment for students diagnosed with ADHD (Fabiano et al., 2009). Ideally, the therapy will be applied to all of the child's environments, including the child's time in school, at home with parents, and even playtime (Fabiano et al., 2009). Parents who are trained in behavioral therapy have also reported success with their children with issues including antisocial and disruptive behaviors (Silverman & Hinshaw, 2008). The main questions that remain in behavioral therapy are not whether it works, but which specific therapy is best in specific conditions and if there is an overall superior approach to behavioral therapy (Kaminski & Claussen, 2017).

K-8 Teachers' Knowledge and Attitudes Surrounding ADHD

In practice, the inclusive classroom can be hindered by preconceived beliefs about students, especially students diagnosed with ADHD, by either teachers or students (Strelow et al., 2021). The beliefs a teacher brings into the classroom may have a significant impact on their effectiveness (Xenofontos, 2018). Some teachers' experiences with inclusive classrooms have been that students without disabilities are not being taught at a proper level or pace of instruction (Kurth & Forber-Pratt, 2017). Since students diagnosed with ADHD will often have impairments that not only slow down their learning but may also create social problems, such as working well in groups, teachers who are inexperienced with the best ways to instruct these students, may have experiences that reinforce any internal bias (Daley & Birchwood, 2010).

According to expectancy-value theory, a teacher's positive outlook and expecting their students to succeed will significantly contribute to students effectively completing a task (Bandura, 1993). Teachers have several variables that will contribute towards either a positive or negative outlook when they are tasked with instructing students diagnosed with ADHD. Variables such as eagerness to learn and acceptance of new things are relevant components to a

teacher's positive perceptions of students diagnosed with ADHD (Sheridan & Gutkin, 2000).

Although it is well accepted that teacher beliefs and perceptions are important, few studies have been generated and primarily focus on externalized behaviors (Sciutto et al., 2000).

Teachers' knowledge and beliefs about ADHD have been studied in the past but are rarely linked together. Many studies will only review whether teachers believe misinformation about ADHD instead of digging down into a clear study of their level of knowledge (Kos et al., 2006). Teachers who lack at least a fundamental knowledge of ADHD may have their opinions influenced by many different factors including experience, education, and culture (*Past and Present Perceptions Towards Disability: A Historical Perspective | Disability Studies Quarterly*, 2012).

Researchers have shown that teachers focus more on a student's behavior than on an ADHD label in the classroom (Ohan et al., 2008). In one study, teachers scored a student lower on a written essay only when they saw videos of the student displaying ADHD symptoms. The teachers were previously told that the student was either diagnosed with ADHD or was a neurotypical student. The results suggested the teachers did not lower their expectancies of the student based on the ADHD label, but after they were shown videos of the student that displayed multiple ADHD related behaviors (Cornett-Ruiz & Hendricks, 1993). Ultimately, despite the ADHD diagnosis not altering the teacher's expectations or outlook of the student, the behaviors that are typically associated with ADHD did alter their view, which is equally as concerning.

Experienced teachers have been found to be more knowledgeable about ADHD and to have completed professional development, but both experienced and inexperienced teachers both scored poorly, 60.7% and 52.6% respectively, on an overall testing of knowledge about ADHD (Kos et al., 2004). In another study, both inexperienced and experienced preservice teachers

scored very low on a test of ADHD knowledge, scoring 52.2% and 52.9%, respectively, while in-service teachers scored higher with an average of 60.2% (Anderson et al., 2012).

Nevertheless, they all received a failing grade as measured by most school systems.

Teachers with more experience, measured in years of full-time teaching, have a slight positive correlation with knowledge about ADHD (Anderson et al., 2012). It is not well known if this knowledge comes from professional training, experience supporting students diagnosed with ADHD, personal studies on the topic, or a combination of methods. Most studies find that teacher experience does not improve teacher knowledge of ADHD unless these teachers were specifically teaching in ADHD classrooms. Teaching in a classroom that specialized in instructing students diagnosed with ADHD had a much greater factor in teacher knowledge about ADHD (Mohr-Jensen et al., 2019). Even experienced teachers can have stress when instructing students diagnosed with ADHD, who display behavior that is disruptive to the other students in the classroom, and harbor negative feelings towards these students (Bussing et al., 2002).

Surprisingly, some researchers have found that teachers who specialize in special education, or a learning support background, are among the most vocal about the lack of adequate professional development and their abilities to teach students diagnosed with ADHD (Mulholland et al., 2015). These special education teachers may just know more about what lies ahead, for any teacher of these students, and the educational challenges that are included with students diagnosed with ADHD and the potential for more comorbid conditions to also be present in these children (Mulholland et al., 2015).

Newly Diagnosed Students

Larger percentages of students are being diagnosed with ADHD as more information about the disability comes to light. The chances of a new teacher having a classroom that

includes a student either diagnosed with ADHD or displaying symptoms of ADHD is very high (Poznanski et al., 2018). The behaviors that emanate from students diagnosed with ADHD can cause a stigma to surround them during their formal education. A low level of a teacher's knowledge about ADHD may lead to poor academic performance by the student, an uncontrolled classroom, and possibly the creation of a hostile environment. Unfortunately, many teachers base their beliefs on false information coming from poor and unconfirmed resources. This may lead to negative perceptions of students diagnosed with ADHD and does nothing to help with the creation of a positive learning environment (Soroa et al., 2015).

Most often, students are diagnosed with ADHD during the beginning of a new school year when warning signs of core symptoms are observed (Campbell et al., 2014). Students who are hyperactive and lack impulse control are often not able to create and maintain positive relationships with their peers and many teachers. Classroom rules are harder to follow for these students, which can be frustrating to teachers and bothersome to follow students. These behaviors are often correlated with grades that are much lower in comparison with other children, especially in the core subjects of reading and mathematics that require more focus on the material (Currie & Stabile, 2006; Daley & Birchwood, 2010).

Since the diagnosis of a student with ADHD is a lengthy and detailed process, requiring input from parents and teachers and concluded by a medical professional, the input from teachers is critical to the overall procedure (Bied et al., 2017). The level of a teacher's knowledge and attitude about ADHD, not only affect their perceptions of students diagnosed with ADHD but are also extremely important since teachers spend so much time with students and may be the first person to identify the disability (Ohan et al., 2008).

Cultural Impact on Perspectives

Differences in teacher knowledge according to nationality have been observed in some studies (Havey, 2007; Jerome et al., 1994; Norvilitis & Fang, 2005). Many teachers from Canada and America believed that ADHD can be outgrown, and that diet had more to do with an effective treatment for symptoms instead of either pharmaceutical or behavioral approaches (Jerome et al., 1994). Few teachers from either country participated in professional development programs about ADHD (Jerome et al., 1994). A comparison between Chinese and American teachers found the Chinese teachers place more emphasis on hyperactive behaviors while American teachers saw the inattention to lessons as the most critical symptom of ADHD (Norvilitis & Fang, 2005). These findings were the same for both in-service and preservice teachers (Norvilitis & Fang, 2005). In a separate study, teachers from both the Netherlands and America reported that pharmaceutical treatment along with behavior modification is the best treatment for children diagnosed with ADHD (Havey, 2007).

Evolving Trends in Teachers' Perspectives

In a survey of teacher beliefs taken in 2019, access to ADHD training and information was thought to be lacking. Additionally, teachers had positive views about therapy, either a separate approach with medication or behavioral therapy, or a combination of the two therapies (Schatz et al., 2021). Teachers also believed they should have a say in the diagnosis of ADHD (Schatz et al., 2021). Lastly, teachers believed that behavioral interventions should be the first step, before any medication was prescribed (Schatz et al., 2021).

National trends may have an influence on the beliefs that teachers have about treatment preferences, although few teachers said they would recommend medication to the parents, as a treatment for children diagnosed with ADHD (Schatz et al., 2021), medication rates have risen significantly over two decades and children are typically getting both medication and behavioral

interventions (Hoagwood et al., 2016). This combination approach of both medication and behavioral interventions leaves teachers with less of a chance to see what the effects of behavioral intervention would have on the child independent of the medication.

A trend in thinking among less experienced teachers seems to be developing towards more use of medication as a first line of treatment for students diagnosed with ADHD. Preservice teachers were surveyed and believed that medication should be used before behavioral interventions (Poznanski et al., 2018). This change in thinking by younger teachers, isn't a shocking change since guidance by professional organizations even differs greatly in the best approach for first line of treatment for students diagnosed with ADHD (Barbaresi et al., 2020). It is also believed that another reason for a higher acceptance of medication for treatment with new teachers is that new teachers do not receive the training necessary to successfully implement behavioral classroom management strategies with good quality reliability and cost-effectively (Flower et al., 2016).

Teachers in a 2019 survey agreed that current classroom management for students diagnosed with ADHD is excessively burdensome and they showed less overall confidence in the results of both stimulant medication and behavioral interventions (Schatz et al., 2021). Teachers, especially younger, inexperienced teachers, are trending towards still using all the techniques available but seeing medication as the overall winner which allows them to devote more time to lesson plans for the entire classroom (Schatz et al., 2021). This trend may need to be examined more closely since it could result in a shortage of pharmaceutical medication if demand outstrips supply.

Professional Development

Professional training programs with the goal of increasing a teacher's knowledge about ADHD have been partially successful (Aguilar et al., 2014). They have been able to effectively raise some types of ADHD knowledge, such as symptoms and behaviors, while other areas need further research.

One area that requires additional professional development training for teachers is classroom management techniques, specifically techniques that can support students with ADHD (Shelemy et al., 2019). Students diagnosed with ADHD find the standard classroom environment to be difficult and not one that easily fits their needs. These students can be restless and noisy, as well as disruptive to their peers. As a result, they are more frequently getting detention, repeating a grade, or even getting expelled from school (Abikoff et al., 2002). It is imperative that teachers acquire knowledge so that they can support the specific needs of their students.

However, a challenge with implementing effective professional development training is that teachers are hesitant to put them into practice (Ward et al., 2022). This is due to the belief that the use of these techniques will alter their lesson planning, require more preparation, or have more staff integrated into their strategy (Ward et al., 2022). The time that teachers will need to incorporate these techniques into their lessons may not be available. The teachers may also believe that other more important material will be left out of the lesson if changes are made.

When general knowledge about ADHD is reviewed in professional development, it rarely translates into changes in the classroom (Ward et al., 2022). Additionally, when teachers are trained in basic interventions and implement them in the classroom, there is a lack of follow-up to see if these interventions are working after 6 months (Both et al., 2016). This short timeframe makes it difficult to gauge any long-term effects of the training programs, their effectiveness in

the classroom, and if there is a continued benefit after the completion of a child's formal education.

Fast-Track Teacher Training

New teachers rarely feel ready for the challenges that await in the management of a classroom, especially if the classroom is integrated with students diagnosed with ADHD (Flower et al., 2016). Due to the ever-increasing number of special education students being combined with students in general education classrooms, any teacher who is unprepared may experience increased stress, little job satisfaction, and thoughts of leaving the profession (Brunsting et al., 2014). Poorly trained or ill-equipped teachers will many times use ineffective techniques while experienced teachers with effective supervision skills show they are able to improve student learning while controlling the classroom (Reinke et al., 2008).

Unfortunately, in a review of special education teacher preparation programs, there was not much content with the sole purpose of classroom management (Oliver & Reschly, 2010). Reactionary techniques instead of preemptively lowering behavioral issues were emphasized in most programs. Evidence-based and research-based approaches are also not the norm in teacher preparation programs (Flower et al., 2016). Researchers concluded that preservice teachers may not have the proper classroom management skills needed to most effectively teach in an integrated classroom (Freeman et al., 2014).

Today, there are many different types of alternative certification programs available, making it possible that different gaps are forming within this type of formal training of future teachers (Flower et al., 2016). In a study of the availability of evidence-based behavior and classroom management in university and alternative certification routes, researchers were able to analyze what types of content were included in the programs (Flower et al., 2016). The most

available content focused on universal approaches that included parent communication, creating a positive climate, and management of student assignments.

Specialized techniques that are used to influence students' behavior in the classroom are more readily taught in university programs that specialize in special education (Flower et al., 2016). Special education programs were found to teach techniques that focused on increasing appropriate behavior much more than regular teacher certification program, 100% vs 57.59% respectively (Flower et al., 2016). Alternatively, training in reducing poor behaviors was most prevalent in university special education programs, at 70.8%, while only 38.76% of the programs that provided an alternative certification in general education included this training. These numbers were very similar to the percentages found in behavioral assessments. Once again, university special education programs had the highest percentage versus alternative certification programs in general education, at 78.7% vs 39.72% respectively (Flower et al., 2016). The last area, behavior management, had university special education certification programs once again lead the others with 89% offering a specific course versus only 58% of alternative certification general education programs including this type of instruction. Overall, any of the teacher preparation programs will provide essential information and skills to future teachers, however, teachers of students with more challenging behaviors, potentially up to 20% of the student population, are likely to use ineffective techniques (Flower et al., 2016) .

Teachers all over the world are instructing more students diagnosed with ADHD, in regular classrooms, than any other time in history (Center for Disease Control (CDC), 2022). Behaviors that disrupt student learning are more prevalent than ever due to the integration of students with learning and behavioral disabilities into general education classrooms (McKenna et al., 2015). The absence of proper training may be harmful to both the students and the teacher

since it could lead to lower academic performance along with teachers feeling depressed in their performance and having lower job satisfaction (Brunsting et al., 2014; McKenna & Ciullo, 2016).

Classroom Management

Students and teachers have different viewpoints on what causes misbehavior in the classroom. Teachers are more inclined to place blame on the family, the upbringing of the child, or a lack of discipline (Kulinna, 2008). Children can be blamed for misbehaving due to reasons such as diet, lack of exercise, bad manners, or boredom. If students are asked for reasons why they misbehave, they are more likely to also use boredom as an excuse, the lesson having no meaning in their life and will never be used, a lack of attention, peer pressure, stress about schoolwork, or their home environment (Cothran et al., 2009). Ownership of the reason for the problem is rare with both sides, teachers and students, attributing the cause to an external factor other than themselves (Cothran et al., 2009). The disparity in these viewpoints may narrow if there was more discussion between teachers and students about their behavior. Students claim that they are not heard and have no chance to be included in any classroom decisions. Instead, teachers use a reward and punishment system that does not give students any voice in the classroom (Honkasilta et al., 2016).

Coercive strategies for classroom management, such as negative reprimands, for students diagnosed with ADHD, are rarely effective but are often used on them, even more so than their peers (DuPaul & Weyandt, 2006). Teachers may see the student diagnosed with ADHD as possessing behavioral traits that are dysfunctional, increase their perception of these traits, and be waiting for them to occur (Ohan et al., 2008). The ADHD label seems to carry universally negative viewpoints with teachers, both in-service and pre-service, along with students, who see

it as a warning for someone with academic, social, and behavior troubles (Kent et al., 2011; Kos et al., 2006).

Classrooms with students diagnosed with ADHD are slow to adapt behavioral interventions (Power et al., 2018). The perceptions of teachers carry significant relevance to the implementation of these interventions since they are most likely directly involved in them (DuPaul & Stoner, 2014). Successful results from these interventions are dependent on many factors but the beliefs that teachers hold on the chances of success and value of the implementation are critically important (Langley et al., 2010). Getting teachers onboard, especially general education elementary school teachers, is helpful to the student since most ADHD services are obtained in those classrooms (Schnoes et al., 2006). These teachers are looking for interventions that they recognize as useful, especially if they have overall positive beliefs about students diagnosed with ADHD (Blotnicky-Gallant et al., 2014). The opinions of these teachers can have a direct impact on their colleagues and the parents of students diagnosed with ADHD. Their beliefs will most likely be shared with each group, colleagues and parents, which may influence what interventions these groups access when a child is first diagnosed with ADHD (Pelham et al., 2016).

Teachers may not have the necessary training or skills to effectively implement behavioral interventions. Only 50% of undergraduate teacher education programs have behavior management strategies as part of their program (Poznanski et al., 2018). The teachers who do not have knowledge of or experience with these strategies may be hesitant to add them into their classroom. It is possible that, due to misconceptions about their effectiveness or doubts about their own skills, they want to hold off on any changes to implement them (Blotnicky-Gallant et al., 2014; Ohan et al., 2011). Even though some surveys show that behavioral interventions can

be implemented with only minor time and training necessary and are typically viewed positively by teachers (Fabiano et al., 2010).

Current Trends in Classroom Management

Teachers prefer to use a variety of approaches when it comes to both teaching and managing an inclusive classroom. The teachers who are trained in preventative techniques prefer to use those methods instead of dealing with the aftermath of an emotional outburst (Moore et al., 2017). In the UK, the National Institute for Health and Care Excellence (NICE) recommends that only teachers who are trained in management of students diagnosed with ADHD should attempt behavioral intervention (*Attention Deficit Hyperactivity Disorder*, 2019). What interventions work best is still up for debate. Some non-pharmaceutical interventions appear to be beneficial, but every case is so individualized that teachers may not know what interventions are best for a particular student at a specific moment.

At the individual classroom level, teachers use a variety of current techniques to help with classroom management. Physical activity is used by teachers and seen as beneficial for students who suffer more from hyperactivity. This is backed up by literature on the benefits of movement for students diagnosed with ADHD (Langberg et al., 2011). Stimulant medication is also used and seen positively by many teachers for the short-term effects of hyperactivity management. Medication has improved the behavior of students diagnosed with ADHD while having few effects on learning (DuPaul et al., 2011). Unfortunately, the long-term effects of medication treatment on children diagnosed with ADHD has not been beneficial (Meerman et al., 2017).

Different school districts tend to favor certain techniques or medication, although there is not a common standard from the results of a study on schooling of ADHD students (Malmqvist, 2018). Current trends will vary on a national, state, and local level as seen in the following

studies. In a Swedish study, one municipality described a strong push by parents for psychiatric diagnoses of students and special classes for students diagnosed with ADHD. Another school relied on a rigid classroom structure along with parent education on ADHD (Malmqvist, 2018). This school experimented with a reward system but concluded that it was not fair to other students and difficult to administer. A few schools focused on medication, with a few teachers requiring it for students diagnosed with ADHD in their classrooms. Medicine was administered at the school and teachers described it as a necessity, “It is impossible to sit and listen to a teacher when you cannot focus on the whiteboard longer than maybe 15 seconds, then you look out the window or look at what your peers are doing, then you do not learn anything...” (Malmqvist, 2018).

Specific Classroom Interventions

Task difficulty and task duration are two items of importance for students diagnosed with ADHD. These students typically have short attention spans and a task that is too long or too difficult can cause frustration. Inattention may quickly follow once frustration sets in along with inappropriate behavior (Brock et al., 2010). Tasks can therefore be given to the student in smaller, more manageable, parts with positive feedback for every completed task. A strategy of starting with simple tasks and proceeding to more difficult ones may also be beneficial (Brock et al., 2010).

Engagement with students diagnosed with ADHD can improve learning and retention. This interaction may come from either the teacher or peer tutoring (Brock et al., 2010). Teaching a lesson helps to reinforce it into long term memory, so peer tutoring can help both the student diagnosed with ADHD, the peer student, and the teacher. Teachers can use other students’ skills to help with the classroom activities, or as overall tutors to struggling classmates (Brock et al., 2010). Students can obtain a higher feeling of self-esteem by seeing their efforts to help other

students pay off as they achieve their goals. Greater engagement with other students may also help students diagnosed with ADHD to make friends in the classroom who better understand their disability.

Students diagnosed with ADHD typically need instructions that are straight to the point. Complicated directions with words that may not be understood will cause inattention. Any different colors on instructions, animated delivery, or props will help to keep their attention in the moment. This is especially important as the day goes into the afternoon since focus and problem-solving skills start to diminish later in the day. After instructions are completed, it is best to let students diagnosed with ADHD work at their own pace since problematic behaviors are less frequent with self-paced work (Brock et al., 2010).

Students diagnosed with ADHD will typically need more break time during the day than the average student. Time to move around, to stretch or do push-ups, and release some physical energy is a benefit to all young students (Brock et al., 2010). Energy can even be spent by active involvement in lessons, such as helping to hand out papers, setting up audiovisual equipment, or acting out a part in a history lesson. Teachers should try to keep distractions at a minimum during these active involvements, especially auditory distractions like students talking, to help keep focus on the activity (Brock et al., 2010).

The use of rewards and consequences is a method that teachers may use as an additional reinforcement to the previously mentioned methods. Desired behaviors can be strengthened by giving praise and encouragement when they take place. This should be introduced as a first step before the use of negative consequences (Brock et al., 2010). A token can be given as a reward, such as a poker chip, and used for a privilege like extra recess time or a tangible item like a

cupcake or playing card. In the case of negative consequences, they should not be used in a way that would embarrass the student (Brock et al., 2010).

School Laws Pertaining to Students Diagnosed with ADHD

ADHD is a qualified disability under both the Other Health Impairment (OHI) section of special-education and Section 504 (“Section 1412,” n.d.). Students diagnosed with ADHD, even if they can achieve passing grades, may qualify for an Individual Education Plan (IEP), and a 504 plan, provided that their behavior is a detriment to their academic or social performance at school. An IEP is an overall design that specifically details how a student’s custom education plan will be executed. This may include specific accommodation that helps with any mental or physical debilities (deBettencourt, 2002). In contrast, a 504 plan is less formal and helps students with a broader range of disabilities to gain access to learning at their school. Qualification for an IEP is stricter with requirements for students to have autism, visual impairment, hearing impairment, emotional disturbance, intellectual disability, speech or language impairment, traumatic brain injury, orthopedic impairment, or other health impairment (OHI) which is where ADHD would be covered. A 504 plan opens services to a larger population of students who have a documented disability that hinders their ability to learn and function in the classroom (deBettencourt, 2002).

Students diagnosed with only ADHD will rarely be qualified for an IEP unless it is a severe case that limits alertness and learning. In most cases, another disability, such as dyslexia, in addition to ADHD will be required to be covered under the Individuals with Disabilities Education Act (IDEA) (deBettencourt, 2002). If a student diagnosed with ADHD does not qualify for an IEP, but has obvious difficulties in a formal education setting, then qualification for a 504 plan may take place. This plan can be molded to help the student with their learning

disability. A key point is that a diagnosis of ADHD does not guarantee either an IEP or a 504 plan to a student. There still must be a significantly hindered ability to learn or behave in school (*Protecting Students With Disabilities*, 2020).

The school needs to support students diagnosed with ADHD, whether they take medication, by developing an appropriate academic and behavior environment to meet their needs. Once a student has an IEP or 504 plan, the school is obligated to execute it. Schools can also, under IDEA and Section 504, provide behavior help for things such as homework completion and address any negative classroom behaviors by the student (deBettencourt, 2002). Teachers who oversee inclusive classrooms, that include students diagnosed with ADHD, are not allowed to refuse to teach that student or abide by the custom plan. If medication is necessary for a student, the school may require a copy of the prescription, to confirm the need to provide the medication while at school, but they cannot require a waiver of liability to perform the role of administrator of the medication. The school may require a medical diagnosis, such as a psychiatric or neurobiological evaluation, but this must be paid for by the school instead of the parents (*Protecting Students With Disabilities*, 2020).

Both the IEP and the 504 plan will typically include the student's parent or legal guardian, the student's general education teacher, and the school's special education teacher. These three people are required to be on the IEP team but including them in a 504 plan is optional (*Protecting Students With Disabilities*, 2020). In a 504 plan, the people involved can be the people who are most familiar with the student and the student's ability to learn and be a part of a formal school environment. The people selected to be on the team, for either the IEP or the 504 plan, will prepare a written document that will include the specific accommodations or services the school will provide (*Protecting Students With Disabilities*, 2020). The IEP must also

include the student's classification, such as diagnosed with ADHD, an up to date academic and behavioral status along with goals, specific strategies for these goals, plans for standardized tests, and a transition plan for higher education and beyond (*Protecting Students With Disabilities*, 2020). The IEPs goals should also be specific, measurable, have achievable results, and be time-limited whereas a 504 plan does not have to include any formal goals (*Protecting Students With Disabilities*, 2020)

Positive Parent-Teacher Relationships

Teachers report higher learning, better behavior, and less conflict with the student when there is a positive relationship between the teacher and the parent (Gwernan-Jones et al., 2015). However, having a positive parent-teacher relationship does not always happen. Accusations of bad parenting may come into play when students act out in class. Teachers have been shown to pass judgment on parents, insinuating poor parenting, when students display disruptive behavior in class and parents feel blamed for their child's bad behavior (Broomhead, 2013). Mothers claimed they were silenced, either a self-imposed silence or silenced by others, when they had discussions about their children diagnosed with ADHD and just did what they were told (Hibbitts, 2009). Judgments appear to be common from both education and health professionals. The outcome of discussions is described in many accounts as frustrating and dismissal (Gwernan-Jones et al., 2015).

Positive parent-teacher relationships are also reported in multiple studies of students diagnosed with ADHD (Hibbitts, 2009; Margalit, 2010). Many teachers develop an expertise in ADHD and share it with parents and colleagues. They see students diagnosed with ADHD as people instead of problems and parents consider them to be an integral part of their child's chances for success at school (Margalit, 2010). Hibbitts (2009) tells of five teachers who were

seen as exceptional people in her son's life. The first of these exceptional teachers was a math instructor who saw Hibbitts' son as a worthwhile person who needed to accept himself, flaws and all, as he was. This teacher helped her son to see the reasons behind some of the school's actions and that he was not being singled out as a target. She was empathetic towards her students but also did not allow them to talk nonsense to her or wallow in self-pity. Unfortunately, constructive relationships tended to be the exception in Hibbitts' account instead of the norm.

Many parents are contacted by the school when their child has behavioral problems in class. If this is the initial contact with a parent, then communication can start out with some tension. In many cases, instead of a discussion, the conversation turns into a lecture and parents describe being pressured into certain actions such as a psychiatric evaluation for their child (Gwernan-Jones et al., 2015). Other researchers reported that teachers were judgmental and left both mother and child feeling degraded and denounced (Carpenter & Austin, 2008). Additionally, multiple studies have shown parental participation to have a positive correlation with their child's learning and behavior in grades higher than preschool (Mautone et al., 2015). Unfortunately, children diagnosed with ADHD tend to have strained parent-teacher relationships that are often a result of higher stress levels and trials related to the child's classroom behavior (Mautone et al., 2015).

Summary

Treatments for ADHD are complex and in some cases contradictory (Kiely & Adesman, 2015). The two main forms of treatment, medication, and behavioral interventions are both used in classrooms but with mixed results. Experienced teachers use behavioral therapy more often and rarely see medication as a first line of treatment (Schatz et al., 2021). Inexperienced and younger teachers tend to be more accepting of medication as a treatment from the start, even

though each child may behave differently while on the medication (Poznanski et al., 2018; Schatz et al., 2021). In most cases, a combination of therapies needs to be discussed while the teacher, parent, and medical practitioner are all involved in the conversations (Barkley, 2006).

Teacher knowledge and beliefs about ADHD have been shown to vary greatly from country to country down to the individual school system (Havey, 2007; Jerome et al., 1994; Norvilitis & Fang, 2005). Research on this topic can be contradicting, with some research revealing that teachers with a high level of knowledge will be more accepting of students with ADHD, while other research reveals that teachers who possess a high level of knowledge desire a pharmaceutical answer to students who have behavioral outbursts (Havey, 2007; Havey et al., 2005). Special education teachers, who are highly trained in behavioral modification and classroom management, have been shown to have mixed feelings about the capabilities of students diagnosed with ADHD (Mulholland et al., 2015). Primary reasons for these differences in beliefs may be due to the complex nature of the illness, degrees of severity, and comorbidities that can also be present in these students (DuPaul et al., 2012). Researchers who try to correlate a teacher's knowledge with their beliefs about ADHD have not been able to show any conclusive results due to positive, negative, and even no correlations in past studies (Alfageer et al., 2018; Anderson et al., 2017; Kos et al., 2004, 2006; Liang & Gao, 2016), and therefore it is imperative to conduct a study that explores teachers' perspectives, along with best practices used while supporting students with ADHD in a classroom setting.

CHAPTER THREE: METHODS

Overview

The purpose of this phenomenological study was to describe the lived experiences of teachers who have experience working with students diagnosed with ADHD in the K-8 public school system in the Mid-Atlantic United States. This phenomenological study enabled teachers to describe their experiences during their instruction of students diagnosed with ADHD in inclusive classrooms. I chose the phenomenological research method, specifically the transcendental phenomenological method, which controls researcher bias by stating an interviewee's responses in their own words. Chapter three provides the research design, research questions, setting and participants, researcher positionality, procedures, and data collection plan. This chapter also includes a data analysis and ethical considerations. This research is important to help provide teachers with the knowledge and tools needed to best instruct the increasing numbers of students diagnosed with ADHD. The thoughts and feelings of these teachers, and their lived experiences, while instructing students with ADHD is not clearly known and analyzed. By incorporating the practical behavior management strategies used by the teachers in this study, this research may help other teachers to maximize learning and motivation in all students.

Research Design

I used a qualitative research design to analyze the beliefs and experiences of teachers (Creswell & Poth, 2018). Qualitative researchers' investigations focus on human experiences in contrast to quantitative designs that focus on measurable events (Vishnevsky & Beanlands, 2004). Therefore, qualitative research is the best approach in this case. I also used a variety of methods of data collection to gain an overall understanding of the problem from multiple

sources. Multiple teacher participants were used to gain a better understanding of any local patterns or differences in the experiences that created more satisfaction. Interviews were used for both the depth and range of experiences of the teachers. Teachers were also asked to write journal entries that may be used as points of discussion. Focus groups were the last method of data collection.

I selected a phenomenological study due to its focus on research tailored towards the experiences and thoughts of the participants (van Manen, 2016). Phenomenology is used as the appropriate method for a researcher to investigate a phenomenon through an analysis of firsthand accounts of a participants' experiences. The phenomenological method also allows statements from participants to have equal weight. These statements were used to create themes that all originated from the collection of thoughts, feelings, and experiences of the participants.

The transcendental method of phenomenology was selected instead of the hermeneutical since it will help to remove the researcher's experiences and focus on describing the experiences of the participants (Moustakas, 1994). It is structured to find and understand the participants' perceptions (Moustakas, 1994). This allowed the researcher to remain an outsider instead of adding researcher reflection, as in the hermeneutical method, which could inject bias into the results.

Research Questions

Central Research Question

What are the lived experiences of K-8 teachers who have experience educating students who are diagnosed with ADHD?

Sub-Question One

How do teachers decide which strategies to implement while educating students who are diagnosed with ADHD?

Sub-Question Two

How have the trainings provided to K-8 teachers informed their instruction of educating students with ADHD?

Sub-Question Three

How do teachers of students diagnosed with ADHD feel that medication impacts the student's academic success?

Setting and Participants

The setting and profile that was used is public education K-8 schools in the Mid-Atlantic states that have students diagnosed with ADHD in inclusive classrooms. The teachers of these students helped to provide a better understanding of what works best in terms of productive learning and classroom management in this environment. Students who are diagnosed with ADHD may receive psychostimulant medication, behavioral therapy, or a combination of the two approaches. What was not well known are the beliefs and experiences of the teachers who are supporting these students. What these teachers have learned during their time as an instructor and supporter of these students helped to establish themes. Furthermore, this information may be a pertinent addition to the data surrounding ideas of how to change the school system to better support students diagnosed with ADHD.

Setting

Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, and West Virginia make up a region known as the Mid-Atlantic states which have inclusive classroom settings for students diagnosed with ADHD. The specific locations were K-8 public schools located in the

Mid-Atlantic states. A grade-span of K-8 was preferable, but not required, since educators have discovered that learning loss may occur with a transition from a K-5 school to a 6-8 grade middle school (Jones et al., 2018). I used remote video, Microsoft Teams, to complete the interviews and focus groups. Since I also used snowball sampling, which requests participants to help me to find even more participants, a few teachers did know each other or were in the same school system (Creswell & Poth, 2018). Nevertheless, a goal was to identify teachers from different locations, to potentially provide a more diverse set of teacher backgrounds and experiences instead of using a cluster of schools in one school district. The typical leadership structure for these schools starts with the state Department of Education, followed by the school Board, an administrative team of Superintendent, Assistant Superintendent, Principal, Assistant Principal, Department Heads, and teachers.

Participants

Participants were selected through a prospecting campaign that looked for teachers who previously or currently teach students diagnosed with ADHD in an inclusive classroom. LinkedIn was used to search for teachers in the Mid-Atlantic states who fit the initial criteria of being a current state certified teacher who is actively teaching in a public school system. Participants in this study range from new teachers of core subject areas with less than five years of experience or experienced teachers with more than five years of experience for grouping into either the inexperienced or experienced groups respectively. Teachers will be categorized as general education or special education based on their educational training and experience. Teachers with specialized college coursework in special education along with experience primarily with special education students will be categorized as special education teachers. A total of ten teachers participated in the study.

Researcher Positionality

This section provides an overview of my motivation for conducting the study, my social-constructivism interpretive framework and my three philosophical assumptions, ontological, epistemological, and axiological that guide the study.

Interpretive Framework

The social constructivism interpretive framework will be used as the researcher looks at a complexity of views. The researcher's goal, using this framework, is to rely on participant views and experiences as much as possible (Creswell & Poth, 2018). Phenomenological studies, like this one in which the teachers will describe their experiences, are apparent in the constructivist worldview (Moustakas, 1994).

Philosophical Assumptions

To give an idea of my overall beliefs that may have an impact on the study, I will be giving an overview of my ontological, epistemological, and axiological beliefs. The ontological has a focus on how I view reality. The epistemological will delve into what I view is knowledge (Creswell & Poth, 2018). The axiological section will explore what values I have and bring into the study.

Ontological Assumption

The nature of reality, how people embrace that reality, and presenting different perspectives is pertinent in a phenomenological paper (Creswell & Poth, 2018). My ontological assumption is that God has created a singular reality. As a Christian, I see the universe, including all physical and unseen realms, as being created by God. Nothing in existence can survive without God. Time is linear and God knows all possible outcomes even though there is only one outcome that exists. God is not a part of the created universe but instead is the ultimate source. I will be reporting the views of my participants though and they may have a different view of

reality and may view their experiences differently (Moustakas, 1994).

Epistemological Assumption

In this qualitative study, the epistemological assumption means that I will collect the subjective experiences of my participants and this is how I will receive knowledge (Creswell & Poth, 2018). As a Christian, I believe that God is the source of all knowledge and the prime cause. There is a difference between facts and knowledge. I can read a bunch of numbers coming from research studies and draw incorrect conclusions from that data. I would not consider my conclusions to be knowledge. Since qualitative research is subjective, it is especially susceptible to conclusions that may turn out to be false or only apply in certain situations.

Axiological Assumption

The values I bring to the study start with a history of being in the pharmaceutical industry. I believe that all researchers have biases that can influence their research. In my case, I have seen firsthand the problems that may develop when pharmaceuticals are one of or the only answer to a problem. Challenges faced in the pharmaceutical industry include active ingredients in medicines that may become scarce, pharmaceutical packaging may interfere or interact with the drug, and logistical issues may arise that cause shortages of supply in certain areas of the world. I have also seen people become addicted to more hardcore drugs when their supply of prescription medication is not available. These potential problems, that surround any pharmaceutical answer, sway my thoughts to non-pharmaceutical answers.

As a student, I found many classes in K-8 to be difficult to sit through. This was not due to the teaching; it was influenced more by the classroom environment. During times of greater interaction, the learning environment was much more interesting, while lecture time was slow and painful. Nevertheless, I see school as a privilege instead of a right. I believe that too many students view school as a social setting while learning during this time is just an inconvenience.

Students who see school as a playground may be able to control their behavior during the school day but just decide they do not want to.

Researcher's Role

My role was to record and interpret the information provided by my teacher participants. The beliefs and experiences of these teachers may vary due to their different training and experiences. I understand that a summary of the teachers' beliefs and experiences may not be able to be broken down into a core generalization. I do not have any authority over the students, teachers, administrators, or the district. I will be the interviewer and interpreter for this study. I have experience as a tutor, but my primary work experience is in the business world. I work in business-to-business sales of pharmaceutical packaging. My bias may be towards solutions that are not based on pharmaceuticals since I see problems that may develop daily. These problems may include active ingredient shortages, interactions with other pharmaceuticals, issues in transportation of the medication, and unknown side effects. I plan to focus solely on the views of my participants though to exclude any personal bias in the study.

Procedures

In this section I will explain the steps used to conduct the study. This explanation includes necessary site permissions, information about securing Institutional Review Board (IRB) approval, soliciting participants, the data collection and analysis plans by data source, and an explanation of how the study achieves triangulation.

Permissions

IRB approval was received from Liberty University (Appendix A). Social media recruitment letters were then mailed to selected teachers (Appendix B). Teachers were asked to review and sign a consent form (Appendix C) if they agreed to participate and provide

convenient times to have an interview. Due to distance and Covid-19, all 10 individual interviews were completed using Microsoft Teams. Two focus groups were scheduled and completed with participants from the 10 teachers who completed the individual interview.

Recruitment Plan

For thematic saturation, according to Bowen (2008), there was a minimum limit of 10 teachers who were participants in the study. After receiving IRB approval, my recruitment plan started with a scan for elementary school teachers in Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, and West Virginia using LinkedIn. I looked for state certified teachers in the public school system. After identifying potential teachers, I sent a short message to them through LinkedIn to see if they were interested in participating in my study. I did not include any financial incentive. I believe this benefited my study due to the knowledge and enthusiasm displayed by all the participants. I included my contact information in the LinkedIn message and asked them to accept a contact request. If they were interested and accepted a connection through LinkedIn, then I was able to send them the detailed social media recruitment letter in Appendix A and consent letter in Appendix B. When I received a few connections, I used snowball sampling technique to request if they know of any other teachers who may be interested in participating in the study. LinkedIn also shows who I am connected to, so it adds some credibility to the prospecting when someone sees that I am connected to someone who they are also connected to. This system allowed me to prospect up to 100 potential participants per day.

Data Collection Plan

Multiple sources were used to gain a broader understanding of the teachers' experiences (Yin, 2018). After approval from Liberty University's IRB, data collection efforts began with the

selection of participants and receipt of signed consent forms. The tools involved came from multiple sources, starting with journal prompts, interviews after a review of the journal prompts, and focus groups. Notes were taken before and after interviews to not interfere with the process (Creswell & Poth, 2018). A schedule was created to help everyone know and plan for their individual interview and focus group participation.

Journal Prompts Data Collection Approach

Journal prompts were requested by teacher participants. These were used to gain a basic understanding of the teachers' beliefs and background. The following journal prompts were sent through email with an Acrobat form that could be digitally completed and signed:

1. What formal training did you receive to support students diagnosed with ADHD?
2. If you received formal training, do you feel that the training was sufficient? If not, then did you need to self-educate on ADHD topics?
3. What are the most important factors that prepare a teacher for success in teaching students diagnosed with ADHD?
4. What advice would you give to students who plan to teach students diagnosed with ADHD in the K-8 public school system?
5. What past experiences, if any, may sway you towards either psychostimulants or behavior modification as a therapy to support students diagnosed with ADHD?

Journal Prompts Data Analysis Plan

Journal entries were selected as a data gathering approach due to time constraints most people have in their daily lives. A journal gives flexibility along with a timeline. Participants can plan a certain time to complete the journal but also have the option to reschedule if something suddenly creates a conflict during that time. Transcription of the journals is not necessary since the journals are already written by the participant. Discussion with the teachers, and

clarifications as necessary were planned within the journal timeframe (Creswell & Poth, 2018). Themes and patterns were checked for relevance to my research questions. Horizontalization was used so that all statements received the same equal weight (Creswell & Poth, 2018; Moustakas, 1994). Memos and tables were used to visually review data. Common themes were coded and organized. These journals were used to analyze the teacher's freeform thoughts compared to more structured background questions. I was looking for a story to emerge telling me more reasons why teachers hold certain beliefs.

Individual Interviews Data Collection Approach

According to Yin, open-ended questions should be used to help build rapport with the participants (Yin, 2018). To progress to in-depth topics and conversations, which are so important to phenomenological studies, I build rapport with the participants through this type of questioning. These interviews were conducted through Microsoft Teams. Meeting in person was preferred, since it helps to add to the connection between researcher and participant but was not feasible due to distance. Teachers were asked a structured set of interview questions with enough time to also branch out on any topic that seems to be of key importance. Confidentiality was ensured by using pseudonyms for all participants and will be in place throughout the study. After giving an overview of myself and my background, I proceeded with the following questions.

Individual Interview Questions

1. Please give me a brief overview of your background, including what motivated you to enter the field of K-8 education.
2. How did your own K-8 classroom experiences help you to relate to any of the challenges faced by students diagnosed with ADHD?
3. How has your personal education affected your teaching style?

4. What support methods have you learned to use in an inclusive classroom environment that has students diagnosed with ADHD?
5. What has shaped your thinking more in the support of students diagnosed with ADHD, education or experience?
6. What behavior modification technique did you first use with a student diagnosed with ADHD?
7. Describe your first behavioral modification experience and how it related to your expectations for success?
8. What have you experienced that challenges your instruction of students diagnosed with ADHD?
9. What environmental changes have you created in your classroom as students diagnosed with ADHD in classrooms have increased?
10. How have your experiences with students diagnosed with ADHD changed your teaching philosophy over time?
11. How would you change the current school system for better support of students diagnosed with ADHD?
12. How have your beliefs and experiences shaped your views on the use of medication for students diagnosed with ADHD?
13. What side effects, such as in personality and learning, have you seen after medication of students diagnosed with ADHD?
14. What do you believe is driving the increase in students diagnosed with ADHD?
15. What would you include in a guidebook for future teachers about behavior modification techniques and medications used for support of students diagnosed with ADHD?

Questions one through five helped me to gain an overall background of each teacher being interviewed. This included insights into the teachers' level of ADHD knowledge and experience supporting children diagnosed with ADHD. These questions provided clarity on behavioral modification techniques that the teachers may know, where they learned these techniques, and their experiences using them in the classroom. Question two helped to see if the teachers feel a connection to their students diagnosed with ADHD due to their own personal experiences as a student during their K-8 studies.

Questions six through eleven were pertinent due to the need to gather information about the teachers' experiences in the classroom while instructing students diagnosed with ADHD. These experiences may lead to changes in their teaching philosophy, the way their classroom environment is structured, or even how they perceive the current school system as a support mechanism for students diagnosed with ADHD. Question eleven gave insights into just how satisfied the teachers are with their current school system in its efforts to support students diagnosed with ADHD and what improvements they feel may be needed.

Questions twelve and thirteen were meant to gauge the teachers' views on medication as a therapy for students diagnosed with ADHD. This helped to see if the teachers believe medication is necessary, a last resort method, or if they believe something in-between so that behavioral therapy and medication can both play a positive role in the support of students diagnosed with ADHD. I wanted to find out if teachers have seen significant changes in student behavior due to psychostimulants and if this has influenced their beliefs in medication as a supporting therapy.

Questions fourteen and fifteen gave insights into how the teachers of today would help the teachers of tomorrow. What factors do they believe are causing a rise in the percentages of

students diagnosed with ADHD and what are the best methods to use in support of these students. These questions were meant to wrap up any thoughts the teachers may have that were not covered by the previous questions.

The questions were based on what would give a good overall answer to past classroom experiences that shaped teaching style, influences inside and outside of school, preferred learning environment, and feelings about medication in support of students diagnosed with ADHD. The questions helped to get background information about the teachers and how they think about inclusive learning. Follow-up questions gave an explanation, in the teachers' own words, about their style of instruction. These questions also helped to give insight into the teachers' thoughts about adaptation to new environments and teaching methods. All the questions were meant to be conversation starters.

Individual Interview Data Analysis Plan

Each qualitative interview was organized on an ongoing basis. I used an audio recording system, Microsoft Teams, that also transcribed speech to text during the interview. Notes were added that were taken before and after the interview to not interrupt the flow or prolong the session. After each interview, I used manual coding to discover any themes and patterns in the transcripts (Yin, 2018). Since I am using a conversational method to interview participants, I used member checks to make sure that each participant is confident in the accuracy of their statements and portrayal of experiences. Each participant also has my contact details in case they want to add any pertinent information that may have been left out of the interview.

Horizontalization was applied so the statements of each participant were valued equally, whether verbal or written. I organized the interviews to find the experiences of the participants. I used the participants own wording to assure accuracy in any interpretations. Epoche or bracketing was

used to eliminate any biases from the study and eidetic reduction was used to funnel down to the necessary characteristics and basic concepts (Creswell & Poth, 2018; Moustakas, 1994).

Focus Groups Data Collection Approach

In focus groups, a small group of teachers was used for another data source. Two focus groups were hosted, the first group had four participants and the second group had three participants. Teachers, through online Microsoft Teams were asked to discuss viewpoints on how they organize and manage their inclusive classrooms that include students diagnosed with ADHD.

Focus Group Questions

1. Discuss what teaching method is most effective for students diagnosed with ADHD?
2. Discuss why either medications or behavioral modifications should be used first to support learning and behavior in students diagnosed with ADHD?
3. Discuss why medication may be necessary in the support of students diagnosed with ADHD?
4. Discuss the best behavior modification methods available to support students diagnosed with ADHD?
5. Discuss the best learning environment for students diagnosed with ADHD?

Question one helped to see if there is a range of beliefs in what is most effective for students diagnosed with ADHD or a consensus between the teachers. Questions two through four added insights into how strongly the teachers believe in the best frontline approach and if they can support their viewpoint. These questions will show whether the teachers are basing their beliefs on strong knowledge and experience, or they are possibly holding to inaccuracies about ADHD. Question five leads into a discussion of what is believed to be the best learning environment. This question is necessary since teachers may be frustrated by the current system in

place and have beneficial ideas about changes that can be made to improve the entire learning environment. This is important since an improvement to the learning environment may significantly increase the level of learning in students diagnosed with ADHD.

Focus Group Data Analysis Plan

The focus group data analysis plan is the same as the individual interview plan. The same concepts are involved with a question-and-answer format. Multiple teacher groups were involved, teaching different subjects, for a mix of viewpoints. These groups were interviewed in two different focus groups, so differentiation between groups was checked for significant variance. I wanted to be confident that the perspectives of the teachers are clear, so transcriptions of the focus groups were completed and organized. A summary of each answer was created to see if each question was adequately answered by the focus group. An analysis of the overall results was beneficial in the understanding of the beliefs and experiences of the participants (Moustakas, 1994).

Trustworthiness

The four tests of trustworthiness, credibility, transferability, dependability, and confirmability are detailed in sections below. Multiple methods were used to collect information since a qualitative study relies on trustworthy data. Since a phenomenological study has a focus on the lived experiences of the subjects (Moustakas, 1994), I used transcribed interviews to ensure that the data was precise and trustworthy. Triangulation was used to validate the collection of data (Creswell & Poth, 2018) by using journals, individual interviews, and focus groups. The transcripts were checked by the participants for accuracy.

Credibility

A researcher writes a credible study if there is confidence in the accuracy of the study's data and findings. Credibility is obtained by using multiple methods of validation (Creswell &

Poth, 2018) and frequent interactions with subjects. Member checking was completed by participants who were asked to review transcriptions of the interviews to check for accuracy (Creswell & Poth, 2018). The data was triangulated by the examination of evidence from all sources by the researcher to justify the established themes (Creswell & Poth, 2018). Moustakas (1994) outlines steps for the proper presentation of the data.

Transferability

Applicability of the study in other contexts was important to show transferability (Lincoln & Guba, 1985). Transferability will be determined if the strategies are valid in different, non-inclusive classrooms (Creswell & Poth, 2018). Teachers of average students may find that motivation changes in their students also as the level of independence is changed. Thick and rich descriptions with significant data were prepared to make certain the study could be reproduced in a different environment.

Dependability

Dependability is addressed using multiple types of data acquisition and analysis. Multiple changes from the participants confirmed patterns or themes from the data. Transcription of the interviews increased dependability, since the subjects were able to check for accuracy (Creswell & Poth, 2018). An inquiry audit is included in the interview data to ensure the setting could be visualized and not lose meaning (Moustakas, 1994).

Confirmability

Confirmability, or authenticity, is established by an audit trail of the interview notes, journals, and applications that are part of the study. I removed researcher bias from the study by focusing on the viewpoints of the subjects (Lincoln & Guba, 1985). Triangulation of the data was included to provide confirmability (Creswell & Poth, 2018).

Ethical Considerations

Researchers must follow certain moral principles that show ethical considerations were used during the study. Data collection took place after Liberty University IRB approval. Consent forms were sent and reviewed for accuracy to confirm that each one has been signed by the corresponding participant. The names of the participants were masked in the study by use of pseudonyms. The information was freely given from subjects who understood that their participation was voluntary, and they could have withdrawn from the study at any time. All information obtained from the study is electronically stored in an encrypted format and password protected. Verbatim responses were recorded from the interview participants to accurately portray their viewpoints (Creswell & Poth, 2018). The data will be destroyed after three years.

Summary

Using qualitative research was the safest method for this subject. The purpose of this phenomenological study was to describe the experiences of teachers during their support of students diagnosed with ADHD in an inclusive classroom. The qualitative approach helped to make sense of the participants thoughts and actions (Creswell & Poth, 2018). By using qualitative research, diverse ways to collect data helped to gain a general awareness of the dilemma from numerous resources. The interviews, focus groups, and journal methods were used to collect this information. The data was reviewed by the participants, after being transcribed, for accuracy and checked for patterns and trends. This chapter provided the reasons for the questions and how they will support the central research question or sub questions. The methods used for data collection, how it was being ethically collected, and protections to the participants have also been established.

CHAPTER FOUR: FINDINGS

Overview

This transcendental phenomenological study strived to convey understanding of the beliefs and lived experiences of K-8 teachers supporting students diagnosed with ADHD. My focus during this study was aimed towards a detailed description of the methods these teachers use, why they use them, and how they support students diagnosed with ADHD in their inclusive classrooms. This chapter will begin with an overview of the background of each participant. The data collected from this study comes from journal prompts, individual interviews, and focus groups. Themes and sub-themes will be discussed followed by a review of the research questions supported by participant quotes.

Participants

The participants who volunteered for this study consisted of 10 public school teachers with experience in the K-8 setting who have worked with students diagnosed with ADHD. All 10 participants lived and worked in the Mid-Atlantic region of the United States. The teachers had a variety of training and experience, some with a focus on special education and others with a general education background. All the teachers were state certified. The teachers (pseudonyms are being used) in this study all have at least one year of experience supporting students diagnosed with ADHD as a teacher. Below is the participant table:

Table 1

Teacher Participants

Teacher Participant	Years Experience	Highest Degree	Training: Gen Ed. or Special Ed.	Grade Level
Mary	5	MA	Special Ed.	K

Laura	3	MA	General Ed.	6 th
Carrie	1	BA	General Ed.	K
Ellen	16	MA	General Ed.	1 st
Beth	8	MA	General Ed.	5 th
Erin	3	Doctoral	General Ed.	various
Carol	7	BA	General Ed.	K-6 th
Marsha	19	BA	General Ed.	1 st -3 rd
Jan	3	MA	Special Ed.	2 nd
Alice	4	MA	General Ed.	1 st -2 nd

Mary

Mary is a kindergarten teacher who discovered as a young teenager that she had a talent and desire for teaching. This was brought to light when she was asked to tutor a neighbor who has autism. After working with him for five years, until she graduated from high school, she was told by his parents that they saw a huge transformation in him. Mary was even invited to an IEP meeting where they mentioned how much she helped this student accomplish. From that experience, Mary realized she could do some good in the world and this drove her into teaching as a profession. She became certified for pre-kindergarten through 4th-grade in elementary education along with pre-kindergarten through eighth grade in special education.

Mary grew up with two brothers who were diagnosed with ADHD. She saw firsthand how ADHD presents itself in different ways with different people. By seeing different behaviors and tendencies from their ADHD, Mary used these experiences to shape how she works with her students. She still asks her brothers for advice if she has a student who displays a need for support in a similar way that they needed support. Mary mentioned that her brothers are very

different in how their ADHD presents itself and a strategy for one may not work for the other. She feels this situation is where experience helps a teacher to build a toolkit of strategies.

Mary reflected how a teacher never really feels prepared for teaching until you're on your own doing it. She thought about how a teacher can read a textbook definition of ADHD, develop a plan, and still have a student who presents a case for support that she has never dealt with before. Learning about ADHD was helpful, but experience has helped her more than education. This has been her experience, especially if one of her students has been diagnosed with ADHD along with a learning disability. It reminds her that there is not a one size fits all approach that can be used in the support of students diagnosed with ADHD.

Laura

Laura is a sixth-grade social studies teacher who fell in love with teaching after graduating from college with a bachelor's degree. Laura was a gifted student in elementary school and didn't need to study much, so it wasn't obvious that she might also be a twice-exceptional student, being both gifted and having ADHD. She was diagnosed with ADHD during her senior year of college after struggling in both high school and her early college years. She uses her personal struggles with school as a reminder of what other children may be going through.

Laura understands that students in the sixth-grade are going through a lot of development and growth during this time in their lives. So even if a child does not officially have an IEP, or a diagnosis of ADHD, she keeps an age-appropriate attention span in mind. She realizes that students in the sixth-grade, being mainly 11–12-year-olds, need different learning methods during an hour-long lesson. Laura structures her lessons to have not only audio learning but also

a video component, activities that allow them to move around, and fidgets, squishy stuffed animals, or stress balls because sometimes all the students need something like that.

Laura believes that her experience, both personally and in the classroom, has helped her to better support students diagnosed with ADHD than her formal education. She mentioned that a student may have obvious expressions of ADHD and need help, but the parents may be in denial. She said that a lot of parents are not well informed about ADHD and feel like they did something wrong or there is something wrong with their child. Unfortunately, she admitted that college courses on teaching didn't really prepare her to handle that type of situation and that it really comes from experience.

Carrie

Carrie is a teacher who knew from a young age that she enjoyed working with children. She loves to see the light in their eyes when they figure something out. Carrie recently finished her first year as a kindergarten teacher. Her personal experiences, such as having a brother who was in third-grade when he was diagnosed with ADHD, have helped her in the classroom to notice students who may display symptoms of ADHD at a young age. She believes that seeing what her brother went through, helping and learning from him, has shaped her views and how she approaches children in her classroom. Nevertheless, Carrie understands that teachers really need to get to know a child's individual needs and what will help them to grow as an individual. She believes that having this knowledge is critical to understanding what methods will work with children instead of just throwing different behavior modifications at them.

Carrie shared that one support method she frequently uses is having a place for an overly stimulated student to calm down. She calls it a calming corner and a student can relax there for a set amount of time, such as five minutes. Students can just sit there on a bean bag and close their

eyes or play with the fidget toys. Carrie will sometimes go join and work with the student doing things such as breathing exercises or a clapping game. This helps to give the student a break from the classroom and lowers the stimulation or frustration they may have been feeling. Since Carrie has a classroom assistant, she can also take a student outside of the classroom to go through an obstacle course or on a walk. She mentioned that this type of break has been very beneficial during the past year.

Ellen

Ellen has been teaching for 16 years and both of her parents were teachers. She grew up with other children in the house since her mother also opened a home daycare. Ellen loved being around children and with teaching in her blood, she knew from a young age that she wanted to be around children. Instead of opening a daycare program, Ellen decided during college to step into a traditional classroom. She has experience as a private preschool teacher, public school second-grade teacher, private school kindergarten teacher, and is currently finishing her third year as a public school first-grade teacher.

Ellen grew up with a lot of structure, both at home and in her education. She brings this structure into her classroom, and it has developed who she is as a teacher. She admits that she needs to loosen up a bit, but as a rule she runs a tight ship. She sees the kids at their happiest when they are following a structured schedule, so they know what to expect. Ellen also has a strong relationship with her students. She has seen that a lot of behaviors can be worked through due to the strength of that relationship. Ellen believes that in addition to structure and routine, patience is key in the support of students diagnosed with ADHD. She may have to repeat instructions and slow down her talking since a student may not be able to concentrate on her directions.

As Ellen gained more experience in teaching, she believes that the rigidity she initially held in her early years did not work well. She admits that she expected all the children to act and perform the same way but that's not how it worked out. Now she understands that children diagnosed with ADHD may not be able to physically help what they do. She was able to take a step back, see through their eyes, and allow them to have the individual room to be themselves instead of like everyone else.

Beth

Beth is a fifth-grade homeroom teacher who obtained an undergraduate degree in elementary education and a master's degree in curriculum and instruction. She just completed her eighth year as a teacher and has experience teaching both internationally and in public schools located in the Mid-Atlantic states. Beth has been told by her supervisors that she is flexible and creative in ways that they do not usually see in the classroom. She credits this mindset to not having preconceived notions of how a classroom should be arranged due to her homeschooled background from kindergarten through high school. She is focused on what works for each individual student and how she can make sure each learning need is met.

Beth starts each year of teaching with the approach that every child is capable of learning, growth, and understanding. She has experience supporting many students diagnosed with ADHD and realizes that each student will have a different set of needs. She does have a few tried and true methods of instruction and engagement with these children. One of these methods is not only speaking her instructions but also writing them on the board. This way if students were not paying attention, they can review what she wrote down when they are more focused. Beth helps students to be focused though by minimizing distractions in her classroom. She knows that even the most focused students can be hindered by a chaotic classroom. Beth told me that children

crave structure, so having an organized classroom where they know what is expected of them along with clear procedures is well received by her students.

Beth feels that her experience supporting students diagnosed with ADHD has shaped her thinking more than her undergraduate and graduate coursework. She had high praise for her past professors and how they prepared her for some situations, but she feels the real key to success in supporting these students is a diverse set of experiences that helps her to adapt to different students. Beth knows that the same strategies will not work with every student. She recently had two students diagnosed with ADHD who both showed almost exact opposite signs. One was always in her seat, but she would be doodling or daydreaming while she looked like the perfect student. Another student would always be out of his chair and trying to do something else in the classroom. These two students have the same diagnosis, but Beth pointed out that the same strategies are not going to work for both students.

Erin

Erin is a teacher with a diverse background. She majored in elementary education during her undergraduate studies, taught pre-kindergarten, and went to seminary for a master of arts in religion. She worked in adult education, became a consultant, did editorial work, and eventually became qualified as an English to Speakers of Other Languages (ESOL) teacher. Erin has now been teaching children for the past three years. She has a few family members who struggled with ADHD, her brother, and his daughter, and she mentioned how seeing her brother's struggles helped her to an increased sense of compassion for students diagnosed with ADHD. In her brother's case, Erin mentioned that he had behavior issues that were treated but the things that really needed to be addressed, never got addressed.

Erin believes that all children need to move around, not just students diagnosed with ADHD. She has fidget devices that the kids can use to burn some energy and set certain times when the children can all make noise with one of the devices. Erin cautioned though that teachers should never underestimate a child's ability to make noise with an item or to destroy it. Erin stated, "If a teacher wants to prove that an item is indestructible, then give it to an eight-year-old and see if the item survives" (Erin, Individual Interview, June 15, 2023). Erin mentioned that these devices would lose their novelty though after a while.

Erin believes that the school system can do more to help educate teachers on what is helpful and effective for the support of students diagnosed with ADHD. She feels that some teachers don't know what to do in sensitive situations concerning students who may show signs of ADHD. Teachers will bring up information about student's behavior to their parents but will hold back if parents ask if they should take their child to a pediatrician for testing. These teachers may be hesitant due to state laws, or because of a lack of knowledge and experience with potential negative blowback.

Carol

Carol didn't start college wanting to be a teacher, so she took a less conventional path to her teaching certification. She focused on the essential coursework and thinks that she missed some useful courses that she would have completed in a four-year program. Once she received her certification, Carol worked as a preschool and kindergarten teacher. She would teach preschool in the morning and kindergarten in the afternoon. After teaching in this environment for five years, Carol accepted a job as a sixth-grade teacher in a general education classroom.

Carol has a good memory of her own K-8 education. She can look back to those times and recall what it was like to be that age again. She even recalls some classmates who may have

been diagnosed with ADHD and the struggles they had in school. Carol believes this helps her to relate to her students and what it is like to be a student who has special needs in a classroom. She feels that a lot of students in inclusive classrooms may not be getting the attention that they need since so much time is taken from teachers when extreme behaviors manifest in the classroom.

Carol believes that choices and variety help not only her students diagnosed with ADHD but all her sixth-grade students. She is more concerned with giving students some independence to walk around, work in groups, or work with a partner if they take their work with them and get things finished. Carol says that this helps them to be comfortable and less distracted in her classroom. She listens to their input since some students may want to sit next to a window while others would find that distracting. This method helps her students to be respectful to her and in her classroom since the alternative is if a student gets disrespectful then the freedoms go away.

Marsha

Marsha is a teacher who primarily taught first through third-grade students and tutored K-12 on the side. She loves teaching and watching her kids grow and learn. She mentioned that she tends to get a lot of students with behavioral problems or Individualized Service Plan (ISP). Marsha doesn't see herself doing anything other than teaching though. She is currently a teacher at a cyber school which she loves since it also gives her freedom to move anywhere in the state and still have that job.

Marsha did a lot of her own research into how to support students diagnosed with ADHD. She said she didn't get much training in college on this topic, so it was very beneficial to supplement her classwork with additional research. This helped her to understand that no two cases of students diagnosed with ADHD will be exactly alike. Marsha mentioned that medication

may work for one but not for another. What she believes is most important is the mindset that a teacher needs to look at each student and build a relationship.

Marsha understands that each student in her classroom will have a different background and different needs. She works on making sure that each of her students is growing and successful. One way she worked to accomplish this goal was to build a relationship with the parents along with her students. This way, an individual plan for a student was much smoother and they received the praise or validation they needed. Marsha said it is a lot of work during the first couple of weeks of school to do this, but it makes the rest of the year much easier.

Jan

Jan had known she wanted to be a teacher since she was seven years old. She loves working with children and worked as a babysitter, tutor, and camp counselor while growing up. She majored in psychology and did a certification program since her school did not have an education major. Jan continued her education with a master's degree in curriculum and instruction. She just finished her third year of teaching second grade students.

Jan credits her many supportive elementary school teachers for her current teaching style. She has a soft spot for kids who are struggling and recalled a story in which her first-grade teacher went to great lengths to make sure that Jan received the assistance she needed. Jan helps her students, particularly the ones who may need extra assistance, by making sure they feel comfortable doing their work and not overly anxious. She stresses to them that they can be successful too, even if they need a little extra help with a problem.

Jan has a calming corner in the back of her classroom. This setup is not only for students diagnosed with ADHD but for other students who may need behavioral support. If a student is feeling frustrated, overwhelmed, or just needs a break, then the student can play with a fidget,

puppets, or other toys. She has a sand timer that gives them two minutes in the calming corner. Jan says this redirection has helped her with the behavioral management in her classroom.

Alice

Alice is entering her fourth year as a teacher. She planned to become a speech therapist but switched to education after she learned how much she enjoys teaching children. She discovered this while working as a substitute teacher in college. After college, Alice started her teaching career by teaching first-grade and second-grade students. She was able to continue her own education with an online master's program in English for Speakers of Other Languages (ESOL). She is planning to start the upcoming academic year as an ESOL teacher at the middle school level.

Alice encourages teachers and parents to try helping students diagnosed with ADHD with study skills, or groups with the school counselor as a first line of treatment. She has seen though that medication can be an effective support for students diagnosed with ADHD in some cases. She noticed that with some students it is the only thing that works after therapies and other methods have not helped. It is another tool in the toolbox. Alice believes that parents shouldn't feel ashamed if medication is needed and improves learning and social skills. If it doesn't work or makes matters worse, then parents along with their child's pediatrician can alter the medication, the dosage, or discontinue the medication.

Alice has a firm but fair approach in her classroom. She wants her students to understand why there are certain rules in place instead of shouting orders on day one. Alice prefers to get to know each student and let them get to know her as their teacher. She shows respect to her students and wants them to respect her as well. Alice understands that this approach can be difficult when there are multiple teachers in one classroom. She makes sure that everyone is

aligned on classroom management, so one teacher doesn't tell students to stay at their desks while another teacher gives them permission to sit around the room.

Results

The purpose of this phenomenological study was to describe the lived experiences of teachers who have experience working with students diagnosed with ADHD in the K-8 public school system in the Mid-Atlantic United States. The data collected during this study included journal prompts, individual interviews, and focus groups. All the data was provided by the participants without any participants withdrawing from the study. After the data collection was completed, it was analyzed to find themes and answers to the questions proposed by the study. In total, over 350 people were contacted through LinkedIn to participate in an initial search for elementary school teachers in the Mid-Atlantic states.

The timeframe for the identification of potential participants to the completion of the data collection spanned from May 2023, after IRB approval, to August 2023. Data collection took longer than I anticipated and may be explained by the timing of the collection since many teachers were finishing the school year and preparing for summer break. Member checking was used for participant validation and accuracy of the data (Creswell & Poth, 2018). Atlas.ti was used for analyzing the individual interview transcripts, focus group transcripts, and coding. Thematic analysis was used to analyze the data, look for patterns, and derive themes and sub-themes from the data.

Table 2

Themes and Sub-themes

Theme 1: Lack of Training

<i>Sub-themes</i>	Personal experiences with ADHD, past formal training
Theme 2: Connection	
<i>Sub-themes</i>	Respect in the classroom, every student is unique, and adapting
Theme 3: Medication as a Last Resort	
<i>Sub-themes</i>	Focus, interpersonal skills

Lack of Training

What a teacher brings into the classroom, from beliefs, stereotypes, and preconceptions is important. A lack of training covering ADHD emerged as a theme from the participants. The teachers who volunteered for the study had a good background in both knowledge and experience with ADHD, but this mainly came from personal experiences and self-study. Some of them acquired this knowledge and experience before they became classroom teachers and others obtained it from teaching experience. The beliefs these teachers had about ADHD in general along with their experience supporting children diagnosed with ADHD were significant influences on their classroom management and teaching methods. Mary states:

So, I think personally having siblings with and growing up, you know, different behaviors and different tendencies and things from their ADHD shaped how I work with students now. I can't remember like in my own schooling like anybody, that I remember of my peers, you know, having it, but definitely the experiences that my parents went through, you know, raising kids with ADHD and then again, you know, interacting and

being a sibling of two brothers having it definitely shaped my view and in my opinion of it (Mary, Interview, May 30, 2023).

Mary could easily realize how her beliefs and experiences with two siblings diagnosed with ADHD molded her thinking and strategies that she uses as she supports her students. All the teachers mentioned that experience supporting students diagnosed with ADHD had a significant effect on their teaching methods. This experience was especially important since they told me how little was covered about ADHD in their education classes.

Personal Experiences with ADHD

Personal experiences with ADHD is a sub-theme that emerged from a lack of teacher training about ADHD. Teachers who at a young age had either personal experiences with ADHD or with others diagnosed with ADHD were able to see how it is affecting them. This helped to shape their beliefs about what is needed to support students diagnosed with ADHD. Laura stated on one of her journal prompts, “Much of my self-education comes from me being diagnosed with ADHD at 22, having to self-manage myself. My college classes didn’t really cover managing students with ADHD or provide enough specific information on that” (Laura, Journal Prompts, May 31, 2023). Mary mentioned on a journal prompt, “I think only one training was helpful for me. My brothers have ADHD, so I have been exposed to ADHD and behaviors for my whole life. I have had to self-educate in order to be a better educator and learn skills and strategies to implement with my students” (Mary, Journal Prompts, May 27, 2023).

Past Formal Training

The teachers who participated in the study were universally consistent with the lack of education concerning ADHD in their formal education studies. Many of the participants completed graduate degrees in education and still confessed to a lack of training concerning

ADHD. Carrie wrote in a journal prompt, “I did not receive any formal training for students diagnosed with ADHD. When I learned that I was not receiving formal training for students diagnosed with ADHD, I did self-educate on topics concerning ADHD in the classroom, as well as in general” (Carrie, Journal Prompts, May 21, 2023). Ellen recalled, “My brief training was enough to scratch the surface of ADHD topics, but I have found that working and collaborating with my special educator who services the IEPs of my students with ADHD is even more beneficial than the information gained through education classes that were several years in the past” (Ellen, Journal Prompts, May 31, 2023). Carol wrote:

I did not receive formal training to support students with ADHD. I took one special education class during my time in the teaching program which covered a range of different diagnoses. I did self-educate myself about students with ADHD. I did some research on my own and then really relied on colleagues for suggestions. I also did a lot of trial and error in the classroom working with students to see what was most effective (Carol, Journal Prompts, June 22, 2023).

Time and time again, the participants in the study reiterated how formal training on ADHD was lacking and they needed to self-educate and ask colleagues for help. This would have caused a significant delay in their ability to optimally support students diagnosed with ADHD in their classrooms.

Connection

Another sub-theme that emerged from the data is teachers working to make a connection with their students. No matter what difficulties a student may display in their classroom, such as a student diagnosed with ADHD or a learning disorder, these teachers made more progress with all students after a bond was made between them and the student. Carol mentioned, “If you know

each student very well and have that rapport with them, they'll you'll be able to respond to them to make sure that they are getting their needs met" (Carol, Individual Interview, July 31, 2023).

Students diagnosed with ADHD may also have other diagnoses or life situations they are dealing with daily. Jan mentioned this during her interview, "I had a student who had trauma. He had ADHD, trauma, insomnia, like all these different things that you know are impacting him at seven years old that he doesn't know what to deal with" (Jan, Individual Interview, July 11, 2023). Jan told me how a student with multiple challenges like these may also need someone to lean on. She states:

So, you're trying to help them with this diagnosis of ADHD, but you're also trying to be, you know, whatever they need, whether that's almost like a mom figure, or you know someone they can lean on. Someone who you know might just want to hear like I love you and you know you need to be more than just a teacher for them (Jan, Individual Interview, July 11, 2023).

Connecting with the students was a universal theme that was mentioned by every participant. They all saw how it helped to make progress in the classroom.

Respect in the Classroom

Respect in the classroom was a sub-theme to connecting with the students. It came up most frequently as students would respect a teacher more when they had a connection and created a stronger connection with the teachers who they respected. Carol told me how she needed to give her students lessons on responsibility and the consequences for their actions. She mentioned how she is very honest with her kids. Carol stated:

I told them what I told you. I can help you as much as you want, but in the end it's on you, you have to be responsible. I know sixth grade is not that old, but also you guys

aren't that young like you're not little kids anymore. You have to be accountable for yourself and you have to think about the fact that next year you're going to start looking at high schools (Carol, Individual Interview, July 31, 2023).

Multiple participants mentioned that students diagnosed with ADHD may not realize they are rude to other students in the classroom. They are impulsive and sometimes another child is offended and may start crying. Carol supports them by asking her students to think about what you say first, is it rude? If so, then apologize and rephrase it (Carol, Individual Interview, July 31, 2023).

Every Student is Unique

The uniqueness in every student was mentioned by all the teachers in the study. No two cases of students diagnosed with ADHD are exactly alike. Carrie mentioned how her teaching style is differentiated, "Every kid is just so different, and if you go into every classroom the same way or approach every child the same way, you're not going to see the growth that you could see" (Carrie, Individual Interview, May 23, 2023). Erin summarized how different environmental changes are useful with different children, so she had a list of ideas to help children including lighting, a calm down corner, and adjustable desks. In some cases, Erin believes that medication shouldn't be dismissed or stigmatized since it may be the best approach for that child (Erin, Individual Interview, June 15, 2023). Masha believes that a teacher needs to be open minded concerning both behavior modification and medication since every student is unique. She states, "Neither sway me, I have seen both used effectively and ineffectively for students with ADHD. Each individual student varies in needs, and it is important to determine what treatment options are best for that unique student" (Marsha, Journal Prompts, July 25, 2023).

Adapting

Being adaptable in the classroom was another sub-theme that emerged from the data. The participants noted that children diagnosed with ADHD need a more flexible classroom with options they can pick at times. Alice mentioned, “Some students may have to have what’s called flexible seating, so maybe they need to stand for a little bit, or maybe they can grab a clipboard and do some independent work on the floor” (Alice, Individual Interview, July 12, 2023). The classroom and how a teacher adapts it for students may be different for each grade level. Mary mentioned, “So you kind of have to problem solve and figure out what inclusion looks like for the grade level, or the kid, or the group of kids” (Mary, Individual Interview, May 30, 2023). She also had to adapt when a plan didn’t go as planned. In one case she recalled a beautiful chart that was broken down into individual subjects, multicolored, with little symbols that the student got to pick, “So I expected this beautiful chart that I created to be the key for this student, but it did not go very well” (Mary, Individual Interview, May 30, 2023). Alice and Mary both adapted to the students, which helped the students to make progress in both cases.

Medication as a Last Resort

Medication as a useful tool in the toolbox came up as a theme from the data. Some teachers have family members diagnosed with ADHD and they are familiar with positive changes in those examples. Laura mentioned, “I am self-aware of the difference, between me a day taking my Adderall, and me a day forgetting to take my Adderall” (Laura, Individual Interview, June 2, 2023). All the teachers stressed that they are not medical professionals though and the decision for medication therapy is between the parents and the medical professionals who are diagnosing their child, in many cases a pediatrician or psychiatrist. Mary summarized it well:

Teachers are not medical experts, so I never personally/professionally recommend medication or therapy. I had one parent this year consider medication and decided to medicate their child. In my opinion, they did the right thing by consulting their pediatrician, working with a psychiatrist, and gathering information from the school to make an informed decision (Mary, Journal Prompts, May 27, 2023).

Focus

Teachers expressed how student focus can be significantly improved with the proper medication and dosage. Alice mentioned, “For some students a simple change of seating, frequent breaks and chunking of assignments is enough. For others they require medication to help them stay focused and be active participants in their learning. Other students are a mix of therapy and medication” (Alice, Journal Prompts, July 12, 2023). Some participants stated that it comes down to the individual student and their level of ADHD. Ellen wrote:

Once it has been established that there is a focus issue, the proper forms from the pediatrician have been filled out, and the medication has been started, it is hard for me to say that the medication does not help bring a level of help in the classroom. I do not believe that psychostimulants are the cure-all answer to ADHD, yet I do believe they do help some children to focus and give them the physical ability to calm their bodies enough to be attentive to learn (Ellen, Journal Prompts, May 31, 2023).

Interpersonal Skills

Teachers who participated in the study also mentioned how medication may not just improve a student diagnosed with ADHD to focus on learning but also benefit their social skills in the classroom. Carol wrote:

My main reason for supporting psychostimulants is the feedback from parents, students, and other teachers about the difference in behaviors when a child begins taking a medication, they need to be able to function in a school setting or even just their daily life. I do believe we overmedicate as a quick fix, but there are children whose quality of education and life improves because of these medications (Carol, Journal Prompts, June 22, 2023).

Carol explained during her interview that she believes in medicating kids if it is necessary. She feels that some students diagnosed with ADHD may need it to function and get the most out of their schooling experience. She shared how a parent told her that after deciding to try Adderall with their third-grade child, he is now able to sleep at night, he doesn't leave the classroom without permission, and he can sit down and go through a lesson. Another child, after starting medication, is now able to have nice conversations and participate in group work (Carol, Individual Interview, June 22, 2023).

Research Question Responses

This section covers the answers to the central question and sub-questions in the study. The previously discussed themes along with added quotes from the participants help to support the answers in this section.

Central Research Question

What are the lived experiences of K-8 teachers who have experience educating students who are diagnosed with ADHD? The participants in the study experienced a variety of situations during their support of students diagnosed with ADHD. The teachers felt poorly prepared for the experiences from their formal training and in many cases, they had to rely on self-study knowledge or just try things out and see what works. Even though the teachers faced difficulties

in the classroom, they all had an encouraging outlook towards the students and desired to see them all succeed in their studies. Most participants related how they became attached to their students and this connection helped both student and teacher to make progress in the classroom. As an example, Jan was extra supportive of a student diagnosed with ADHD who also has other disorders. She connected with this student and her emotional support helped him to deal with the trauma in his life so he could learn more during the school day. These examples aligned with the Lack of Training and Connection themes in my research.

Sub-Question One

How do teachers decide which strategies to implement while educating students who are diagnosed with ADHD? All the participants said that experience was important since their formal training was sparse in supporting students diagnosed with ADHD. In addition to experience, Mary stated:

Teaching is an art, and it requires trial and error. A technique or strategy that works for some kids may not work for others. Take time to build a positive relationship with your students. Also, I have learned that students respond well when they are part of their learning and support. If appropriate ask students what helps them, things they are motivated by, and try to understand their struggles. Asking for help is always ok!

Remember parents are part of the team to help students. Parents may have insights on how their student responds to interventions and they can provide information about what works/doesn't work (Mary, Journal Prompts, May 27, 2023).

Mary's response aligned with the Connection theme. By growing a strong connection between teacher and student, the entire teaching environment can be made better.

Marsha added that most teachers are only trained on the basics of ADHD, so experience is where they really see what works. She stated:

Until you actually get that student who has ADHD in front of you and seeing ok, this is a trigger for them, this is not, this works for them, this doesn't work. Until you actually experience it with a student, is completely different, so definitely experience has really shaped how I address each student and how I handle anyone who has ADHD in the classroom (Marsha, Individual Interview, July 31, 2023).

Marsha's response aligned with Lack of Training. Due to the lack of training received by most teachers, they need to rely on experiences with students diagnosed with ADHD to see what works.

The participants also used a variety of methods that depended not only on their experience and the individual child, but also what resources were available. Some schools were better funded or received gifts from parents for their classrooms such as wobble stools or wobble cushions. Jan mentioned, "Somebody who is diagnosed with ADHD, who needs to be constantly moving, these types of seating is good for them. I kind of give the students the option of where and how they want to sit" (Jan, Individual Interview, July 11, 2023). Jan's response can be aligned with the Connection theme, even though she mentions resources, since she still needs to have an idea of what may work for students in her classroom.

Sub-Question Two

How have the trainings provided to K-8 teachers informed their instruction of educating students with ADHD? The teacher participants in the study experienced a lack of training in the support of students diagnosed with ADHD in their formal education programs. These teachers needed to rely more on personal experiences with family members who presented ADHD

symptoms, self-study, and experience with students diagnosed with ADHD in their classrooms. Professional development courses were often focused on general education instead of supporting students with disabilities. Teachers mentioned that the training they received was also very basic and only addressed rudimentary topics concerning ADHD such as what medicines were available to kids who are diagnosed with it. Laura stated, “I did need to self-educate. Much of my self-education comes from me being diagnosed with ADHD at 22, having to self-manage myself. My college classes didn’t really cover managing students with ADHD or provide enough specific information on that” (Laura, Journal Prompts, May 31, 2023). Carrie, like many others, also took it upon herself to self-educate, “When I learned that I was not receiving formal training for students with ADHD, I did self-educate on topics concerning ADHD in the classroom as well as in general” (Carrie, Journal Prompts, May 21, 2023). Overall, the participants needed to self-educate about supporting students diagnosed with ADHD and do a lot of trial and error once they began working in the classroom to see what was most effective. These examples aligned with the Lack of Training theme in my research.

Sub-Question Three

How do teachers of students diagnosed with ADHD feel that medication impacts the student's academic success? The participants were open to medication since many of them saw positive effects with their students. They also did not see medication as a necessity in many cases if a student has a support system at home and an understanding teacher. However, medication was seen as a helpful tool that could enhance a student’s academic success in the K-8 classroom. Beth mentioned, “I have seen kids that I know come from really solid homes and they just cannot focus right, and the medication is just that extra little push they need to actually be able to achieve at a high level” (Beth, Individual Interview, May 26, 2023). Mary has two brothers who

were diagnosed with ADHD, one brother found the medicine works for him and he still takes it, while her other brother needed to try a few variations. She did see positive changes in both of her siblings' behavior, success in school, and socially.

Medication does not always work though, and a student may have too many negative side effects that outweigh any positive benefits. Jan told one of the focus groups about a student in her class who was diagnosed with ADHD. The student's mother said, "We had to switch medications because the first one was not making her feel good. She wasn't eating the way she was supposed to, and she wasn't sleeping" (Focus Group A, July 19, 2023). The student's mother came back to Jan again and said medication is not for her daughter. The second medication made her daughter feel like a zombie. In this case, the medication changed Jan's student from a bubbly girl to a lethargic shell of her former self. These examples align with the Medication as a Last Resort theme since they show how medication can either be a solution after other methods have been shown not to be effective, or how it should not be used in some cases.

Summary

Chapter four focused on providing an overview of the study, main themes along with sub-themes, and answers to the central question and sub-questions. It also provided a background of the participants, their education and experience, quotes from their journal prompts, individual interviews, and focus groups to support the main themes and sub-themes. Discussions of the main themes, being Lack of Training, Connection, and Medication as a Last Resort were provided along with direct quotes from the participants to show solid examples. The results of the study confirmed that formal education to support students diagnosed with ADHD is severely lacking. The participants reflected on how they needed to self-study and experiment with a trial-and-error approach when they started their teaching career. Furthermore, the findings revealed

how making a connection with students diagnosed with ADHD is a powerful method that helps with behavior modification and increases learning. Last, the study suggested that medication is a powerful tool that can be used to increase learning, focus, and social interactions in many cases after proper evaluation from a medical professional.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this phenomenological study was to describe the lived experiences of teachers who have experience working with students diagnosed with ADHD in the K-8 public school system in the Mid-Atlantic United States. The discoveries during this study provided answers to the central research question and sub-questions, along with insights into best practices to support students diagnosed with ADHD. The theoretical framework that guides the study is expectancy-value theory (Wigfield & Eccles, 1992). Chapter five consists of the following subsections: (a) interpretation of findings, (b) implications for policy and practice, (c) theoretical and empirical implications, (d) limitations and delimitations, and (e) recommendations for future research.

Discussion

The participants in my study shared their beliefs and lived experiences in the support of students diagnosed with ADHD. The journal prompts, individual interviews, and focus groups were able to give me insights into their methods and why they chose specific ways to support their students. The findings of this study can be used to guide new teachers, help in the development of behavioral modification techniques, and provide a foundational study in ADHD that is lacking in many teacher education programs. The discussion section has five major subsections including interpretation of findings, implications for policy or practice, theoretical and empirical implications, limitations and delimitations, and finally recommendations for future research.

Interpretation of Findings

The purpose of this phenomenological study was to describe the lived experiences of teachers who have experience working with students diagnosed with ADHD in the K-8 public school system in the Mid-Atlantic United States. An analysis of the journal prompts, individual interviews, and focus groups from the 10 teachers who participated in the study formed themes and sub-themes derived from the teachers' beliefs and experiences. The distinct themes that became evident were (1) lack of training, (2) connection, and (3) medication as a last resort. The findings provided answers to the central research question and three sub-questions.

Summary of Thematic Findings

The findings of this transcendental phenomenological study intended to show how K-8 public school teachers view and support students diagnosed with ADHD in their classrooms. An analysis of the data that was collected brought about the main themes in the study. The teacher participants revealed how their training on ADHD was lacking, connecting with students was critical, and medication can be a useful tool when needed. Sub-themes emerged while analyzing the data. There were no outliers in the data although the data sample consisted of 10 participants.

Training is Critical. I always tell people not to create their fire escape plan during a fire, meaning to prepare for things beforehand. Teachers in the study had a variety of experiences and training, such as training in general education, special education, or teacher certification programs but most of the programs were lacking in one way or another. Most participants expressed how unprepared they were in support of students diagnosed with ADHD until after they gained experience in the classroom. Remarks about their formal education related to ADHD was dismal with only surface level training about ADHD that left them ill prepared for the challenges they had, supporting students diagnosed with ADHD, in the beginning of their

teaching careers. It was only through their own perseverance in self-study, obtaining help from colleagues, and trial and error in the classroom that they gained the skills and knowledge needed to fully support their students. I find this to be an unacceptable practice in current school systems and education programs. Especially since it was not a minority of participants who mentioned that their training was poor to none before entering the classroom. Professional development courses are offered by most districts, but these tend to be focused on general education topics and classroom management. My participants stated that they needed to quickly adapt to provide support to students diagnosed with ADHD in their inclusive classrooms. It seems that more specialized training sessions for teachers are needed instead of generic instruction that applies to the masses. Teachers should not need to learn on the battlefield since this method has negative consequences for both the students and their teachers. Even an online training course that shows role playing examples of how teachers support students diagnosed with ADHD could be incorporated as a requirement in education programs with little to no cost increase in the program. Once the school year starts, the lessons that teachers need to learn through experience, as they try things out, is a much more costly system.

Teacher and Student Relationships. Relationships are such a critical part of growth as people go through life. Children are especially vulnerable to a lack of closeness with adults who are needed to guide them. My participants expressed a great deal of care for their students, and this was beneficial in ways that were seen in the classroom. I would speculate that many unseen benefits were also produced in the lives of their students outside of the classroom. A closeness with their students also helps the teachers to grow and see things in a different light. In this study, as a teacher's knowledge and closeness to their students increased, their empathy towards these students also increased. This brought an even higher level of connection with their

students. In many cases, specifically those that did not require medication, the connection between the student and the teacher was the strongest support method.

Medication as a Tool. Despite being a support method that should be used after other methods have been tried, medication remains to be one of the most powerful methods of support for students diagnosed with ADHD. It should be seen as another tool in the toolbox that is best used in certain situations. Even though it can produce wonderful results, medication should still not be a first-tier approach for support since it can have harmful side effects or other negative issues. One of these negative issues is the current shortage of Adderall. There are many reasons that can produce a shortage, from regulations on limits of supply to logistics issues with getting the medication to the needed location. Overall, medication should be seen as a powerful tool that needs to be used properly.

Implications for Policy and Practice

Continued research into the lived experiences of teachers who support students diagnosed with ADHD will help to establish best implementations in both policy and practice. The findings of this study show what teachers feel is needed to help them support their students. Parents, school administrators, and medical professionals should also be involved in this support. A combined effort from all parties, including the student, will produce the best results. The following recommendations are therefore intended for parents, teachers, administrators, and medical professionals as they all work towards better methods to understand and aid students diagnosed with ADHD.

Implications for Policy

This study discovered a severe lack of training in the support of students diagnosed with ADHD as a part of teachers' formal education. Since there is an average of at least one student

diagnosed with ADHD in each classroom, it is critical to incorporate more formal training on ADHD into undergraduate teacher education and certification programs (DuPaul & Stoner, 2014). At the state level, it is recommended that policies are put in place so that student teachers have more experience observing and participating in the interactions with students diagnosed with ADHD during their classroom training. Due to the unique nature of ADHD and how it presents itself in different students, the student teachers may be able to do a rotation within inclusive classrooms. This would help to make sure they receive exposure to as many different students as possible and see how experienced teachers interact with students diagnosed with ADHD in their classrooms.

A district or state policy to help in the testing of students who may be diagnosed with ADHD is needed. Even experienced teachers do not mention that a student may have ADHD symptoms and instead suggest testing by a psychiatrist or pediatrician. This needs the approval and funding of the student's parents so there is a chance it may never happen. In my study, some participants expressed concern that students were not being tested due to stigma or financial restraints. It may be beneficial if a free preliminary screening is available at the school to help identify students who present ADHD symptoms as soon as possible.

Implications for Practice

Schools currently have parent teacher back to school night. What may also help is parental professional development. This would be a short course, possibly only one night a month, to help parents understand how to better support their children who are diagnosed with ADHD or might be displaying symptoms. Teachers have mentioned that parents will rarely read pamphlets that are sent home, and a more direct approach is needed. This may also help to create a team approach along with building rapport between the parents and the teachers.

Participants in my study have mentioned that parent-teacher communication is lacking. Potentially mandatory monthly meetings could help to increase communication on a variety of topics. Participants mentioned that students may sometimes try to hide things from parents. By having open communication between parent and teacher, on a regular basis, it may help to keep parents better informed of what goes on in the classroom.

New teachers may also want to inform administrators of their interest in learning about ADHD. There may be colleagues at the school who are experts in providing support to students diagnosed with ADHD. These colleagues may be willing to help the new teachers with lesson plans more suited to their students. There is no need to reinvent the wheel. So, methods and lessons that have worked well in the school system can be tested in other classrooms to see if there are any improvements.

More environmental control in the classroom may be beneficial. Teacher participants who mentioned they had options, such as turning off the lights and minimizing distractions, were able to increase learning and lower student discomfort. Standing desks, or adjustable desks, may also be an enhancement in the classroom since they help people to have more freedom of motion. These desks are showing increased popularity in adult offices and may also be a positive addition in student classrooms. Erin stated, “There is nothing sacred about sitting while paying attention” (Erin, Individual Interview, June 15, 2023).

Theoretical and Empirical Implications

This study used expectancy-value theory as the foundation (Wigfield & Eccles, 1992). As previously stated, expectancy-value theory comprises both how highly someone values a goal and how much they are willing to sacrifice to achieve that goal in a current situation (Thatcher Day, 2021). The theory helped to develop theoretical implications. A connection between the

theory and my findings is in the theoretical implications section. A connection between my findings and the related literature in Chapter 2 is in the empirical implications section.

Theoretical Implications

Expectancy-value theory was useful as the theoretical framework for insight into teachers' beliefs and practices in an inclusive classroom, containing students diagnosed with ADHD. The theory helped in developing an understanding of why teachers with more knowledge of ADHD believed that the students were more capable of completing assignments. It also provided a link between teacher knowledge and being more empathic toward difficulties the students presented in the classroom. These findings make it important to increase understanding of ADHD in general, at an early stage of a teacher's training. By doing so, teachers do not enter a classroom with erroneous preconceived beliefs about the students' abilities.

Another theory from my research in relation to expectancy-value theory involves the expectation of success and lack of training. Teachers are the focus of this theory. Participants who did not receive training specialized to support students diagnosed with ADHD in their general teaching education programs showed lower expectations of success in the classroom. Lower expectations were present in most cases until more experience played a key role in raising expectations of success. Most of the participants mentioned how they needed to self-educate on ADHD topics. After self-educating they needed to test by trial and error the behavioral modification techniques, they thought were best. This is like reinventing the wheel with each new group of teachers entering the workforce. A potentially better method would be for administrators to plan in-house training for new teachers by experienced teachers. A review of students diagnosed with ADHD, on an individual basis, can be discussed with their previous teachers so methods and strategies that worked with these students can be shared.

Empirical Implications

This study adds to current research by building a stronger case for the need of additional and earlier training for teachers who support students diagnosed with ADHD. Through the journal prompts, individual interviews, and focus groups, it was clear that new teachers do not feel prepared to support these students until later in the school year. Identifying a student who may later be diagnosed with ADHD is a multi-step process (Cabral et al., 2020). As the school year progresses, many teachers feel shackled by policies that prevent them from being open about their observations concerning a student who may display ADHD symptoms. This is concerning since many symptoms of ADHD become evident during classroom activities (Brock et al., 2009). If too much is mentioned, administrators and teachers alike are also anxious about possible lawsuits or backlash from parents who don't understand ADHD or see it as a stigma.

Some of the participants mentioned that symptoms of ADHD might be misidentified. This contributes to Richard Saul's research that tells how many symptoms of ADHD can be caused by other factors (Saul, 2014). These factors may be as simple as a lack of sleep or sensory loss such as poor eyesight. Misidentification due to environment was also a possibility that was stated during my study. Participants told how it may be easier to spot a potential symptom when it stands out in a crowd of students such as in an auditorium. This could be influenced though by tolerance or intolerance for certain behaviors though and contribute to a higher rate of diagnosis (Harvey et al., 2005). So, my study participants agreed that it is best to get to know the student and have a team approach with parents, teachers, and medical professionals in the identification of ADHD symptoms.

Limitations and Delimitations

Limitations are characterized as potential weaknesses of the study that the researcher cannot control. One major potential limitation that I experienced was enrolling participants who

were all female. I found 10 female participants over the course of three months' time. Saturation was ultimately achieved for the study with these 10 female participants. I did reach out to a significant number of male elementary school teachers but none of them were interested in participating in the study. This might be a limitation since children react differently to male and female teachers which can influence a teacher's beliefs and experiences in the classroom. Female teachers may also be more nurturing and become a teacher for more benevolent reasons while male teachers might be more focused on the profession as a career that pays the bills. These reasons may affect how male and female teachers interact and respond to students in their classrooms. If more time was available, the gender limitation along with my other limitations of sample size and time constraint may all have been eliminated.

Delimitations are created by the researcher to limit or define the boundaries of the study. For my study, I chose transcendental phenomenology over hermeneutic phenomenology so I could solely focus on the beliefs and experiences of the teacher participants and remove my own opinions. Other delimitations in the study were selecting participants who are certified as public-school teachers and working with K-8 students. Additionally, the participants needed to have at least one year of teaching experience. These delimitations were selected to help control variations in training, classroom experience, and teaching environment. A private school teacher may have different requirements to become a teacher whereas public school certification is more uniform. A private school teacher can also be employed in a much different environment than a public-school teacher, with a lower student to teacher ratio and more resources available to the classroom. I also used snowball sampling in the study and two of the participants were recommended from teachers who I previously interviewed earlier in the study. Since these two

individuals knew and recommended two other teachers, they may be friends and share viewpoints that could steer my research to a certain extent.

Recommendations for Future Research

It would be interesting for future research to produce a gender-oriented study. My first thought would be that male teachers would be asked for their beliefs and experiences supporting students diagnosed with ADHD. This could be compared to my study of 10 female teachers to analyze if there are any significant differences in their thoughts or methods of support. Another gender-oriented study would be to focus on only male students diagnosed with ADHD or female students diagnosed with ADHD and compare how teachers supported each group. This was touched upon in my study, but it wasn't completely explored.

A study from the parents' viewpoint would be welcome. Parents could share their beliefs and experiences about their children who are diagnosed with ADHD. This study could be compared to my study to compare the views of parents and teachers. The results may help to bring more discussions and interactions between parents and teachers in a combined effort to support children diagnosed with ADHD.

Long-term effects of medication usage with students diagnosed with ADHD needs more research. Sub-question three of this study asked how teachers of students diagnosed with ADHD feel that medication impacts the student's academic success, but this was focused on short-term success in their classroom. A study that explored student success during high school, college, and into the job market would be interesting. This study should check to see if students continued their medication, made any changes, or were able to discontinue medication at a certain time in their formal school years. A biological component of this study would also be

helpful to see if there is any change in brain growth or activity while medication is used during a student's brain development.

Conclusion

The purpose of this phenomenological study was to describe the lived experiences of teachers who have experience working with students diagnosed with ADHD in the K-8 public school system in the Mid-Atlantic United States. This study used expectancy-value theory as the foundation (Wigfield & Eccles, 1992). I proposed a central question and three sub-questions as a basis for the study. My central research question was: What are the lived experiences of K-8 teachers who have experience educating students who are diagnosed with ADHD? My first sub-question stated: How do teachers decide which strategies to implement while educating students who are diagnosed with ADHD? Sub-question two asked: How have the trainings provided to K-8 teachers informed their instruction of educating students with ADHD? Sub-question three asked: How do teachers of students diagnosed with ADHD feel that medication impacts the student's academic success?

Three themes emerged after I collected and analyzed the data: lack of training, connection, and medication as a last resort. The combination of these themes was able to answer my central research question along with the three sub-questions. Some of the teachers in the study mentioned that as they learned more about ADHD during their teaching career, their views about students diagnosed with ADHD changed. This finding along with the teacher data collected from journal prompts, individual interviews, and focus groups suggests that teachers need more training in how to support students diagnosed with ADHD before they begin their careers as public-school teachers. Future research recommendations include a similar study with male teachers who support students diagnosed with ADHD, a study with a focus on how parents

support their children who are diagnosed with ADHD, and the long-term effects of medication both biologically and as support in a student's continued success after K-8.

References

- Abikoff, H., Jensen, P. S., Arnold, L. L. E., Hoza, B., Hechtman, L., Pollack, S., Martin, D. P., Alvir, J., March, J. S., Hinshaw, S. P., Vitiello, B., Newcorn, J. H., Greiner, A. R., Cantwell, D. P., Conners, C. K., Elliott, G. R., Greenhill, L. L., Kraemer, H. C., Pelham, W. E., . . . Wigal, T. (2002). Observed classroom behavior of children with ADHD: Relationship to gender and comorbidity. *Journal of Abnormal Child Psychology*, *30*(4), 349–359. <https://doi.org/10.1023/a:1015713807297>
- Abrami, P. C., Poulsen, C., & Chambers, B. (2004). Teacher motivation to implement an educational innovation: factors differentiating users and non-users of cooperative learning. *Educational Psychology*, *24*(2), 201–216. <https://doi.org/10.1080/0144341032000160146>
- Adalio, C., Owens, E. B., McBurnett, K., Hinshaw, S. P., & Pfiffner, L. J. (2018). Processing speed predicts behavioral treatment outcomes in children with Attention-Deficit/Hyperactivity Disorder predominantly inattentive type. *Journal of Abnormal Child Psychology*, *46*(4), 701–711. <https://doi.org/10.1007/s10802-017-0336-z>
- Aguiar, A., Kieling, R. R., Costa, A. C., Chardosim, N., Dorneles, B. V., Almeida, M. L., Mazuca, A. C. M., Kieling, C., & Rohde, L. A. (2014). Increasing teachers' knowledge about ADHD and learning disorders. *Journal of Attention Disorders*, *18*(8), 691–698. <https://doi.org/10.1177/1087054712453171>
- Alfageer, H. H., Aldawodi, M. D., Queflie, S. A., Masud, N., Harthy, N., Alogayyel, N., Alrabah, M., & Qureshi, S. (2018). Knowledge and attitude of male primary school teachers about attention deficit and hyperactivity disorder in Riyadh, Saudi Arabia.

Journal of Natural Science, Biology, and Medicine, 9(2), 257.

https://doi.org/10.4103/jnsbm.jnsbm_232_17

Anderson, D., Watt, S. E., Noble, W., & Shanley, D. C. (2012). Knowledge of attention deficit hyperactivity disorder (ADHD) and attitudes toward teaching children with ADHD: The role of teaching experience. *Psychology in the Schools*, 49(6), 511–525.

<https://doi.org/10.1002/pits.21617>

Anderson, D., Watt, S. E., & Shanley, D. C. (2017). Ambivalent attitudes about teaching children with attention deficit/hyperactivity disorder (ADHD). *Emotional and Behavioural Difficulties*, 22(4), 332–349.

<https://doi.org/10.1080/13632752.2017.1298242>

Bandura, A. (1993). Perceived Self-Efficacy in cognitive development and functioning. *Educational Psychologist*, 28(2), 117–

148. https://doi.org/10.1207/s15326985ep2802_3

Banerjee, S. (2013). *Attention deficit hyperactivity disorder in children and adolescents*. BoD – Books on Demand.

Barbarese, W. J., Campbell, L., Diekroger, E. A., Froehlich, T. E., Liu, Y. H., O'Malley, E., Pelham, W. E., Power, T. J., Zinner, S. H., & Chan, E. (2020). Society for Developmental and Behavioral Pediatrics Clinical Practice Guideline for the Assessment and Treatment of Children and Adolescents with Complex Attention-Deficit/Hyperactivity Disorder.

Journal of Developmental and Behavioral Pediatrics, 41(2S), S35–S57.

<https://doi.org/10.1097/dbp.0000000000000770>

Barkley, R. A. (2006). *Attention-Deficit Hyperactivity Disorder, third edition: A Handbook for Diagnosis and Treatment*. Guilford Press.

- Barkley, R. A. (2008). Classroom Accommodations for Children with ADHD. *The ADHD Report*, 16(4), 7–10. <https://doi.org/10.1521/adhd.2008.16.4.7>
- Bekle, B. (2004). Knowledge and attitudes about Attention-Deficit Hyperactivity Disorder (ADHD): A comparison between practicing teachers and undergraduate education students. *Journal of Attention Disorders*, 7(3), 151–161. <https://doi.org/10.1177/108705470400700303>
- Berman, S. M., Kuczenski, R., McCracken, J. T., & London, E. D. (2009). Potential adverse effects of amphetamine treatment on brain and behavior: A review. *Molecular Psychiatry*, 14(2), 123–142. <https://doi.org/10.1038/mp.2008.90>
- Bied, A., Biederman, J., & Faraone, S. V. (2017). Parent-based diagnosis of ADHD is as accurate as a teacher-based diagnosis of ADHD. *Postgraduate Medicine*, 129(3), 375–381. <https://doi.org/10.1080/00325481.2017.1288064>
- Biederman, J., Faraone, S. V., Mick, E., Spencer, T., Wilens, T., Kiely, K., Guite, J. W., Ablon, J. S., Reed, E. D., & Warburton, R. (1995). High risk for attention deficit hyperactivity disorder among children of parents with childhood onset of the disorder: a pilot study. *American Journal of Psychiatry*, 152(3), 431–435. <https://doi.org/10.1176/ajp.152.3.431>
- Blotnicky-Gallant, P., Martin, C., McGonnell, M., & Corkum, P. (2014). Nova Scotia teachers' ADHD knowledge, beliefs, and classroom management practices. *Canadian Journal of School Psychology*, 30(1), 3–21. <https://doi.org/10.1177/0829573514542225>
- Bolinger, Sarah J.; Mucherah, Dr. Winnie; and Markelz, Dr. Andrew M. (2020) "Teacher Knowledge of Attention-Deficit/Hyperactivity Disorder and Classroom Management," *The Journal of Special Education Apprenticeship*, 9(1), Article 5. <https://scholarworks.lib.csusb.edu/josea/vol9/iss1/5>

- Bora, E., & Pantelis, C. (2016). Meta-analysis of social cognition in attention-deficit/hyperactivity disorder (ADHD): comparison with healthy controls and autistic spectrum disorder. *Psychological Medicine, 46*(4), 699–716.
<https://doi.org/10.1017/s0033291715002573>
- Both, F., Schmiedeler, S., Abelein, P., & Schneider, W. (2016). Wirksamkeit eines Workshops für Lehrkräfte über die Aufmerksamkeitsdefizit-/Hyperaktivitätsstörung (ADHS). *Praxis Der Kinderpsychologie Und Kinderpsychiatrie*. <https://doi.org/10.13109/prkk.2016.65.5.315>
- Bowen, G. A. (2008). Naturalistic inquiry and the saturation concept: a research note. *Qualitative Research, 8*(1), 137–152. <https://doi.org/10.1177/1468794107085301>
- Bradley, C. (1937). The behaviour of children receiving benzedrine. *American Journal of Psychiatry, 94*(3), 577–585. <https://doi.org/10.1176/ajp.94.3.577>
- Brock, S. E., Grove, B., & Searls, M. (2010). ADHD: Classroom Interventions.
- Brock, S. E., Jimerson, S. R., & Hansen, R. L. (2009). *Identifying, assessing, and treating ADHD at school*. Springer.
- Broomhead, K. E. (2013). Blame, guilt and the need for ‘labels’; insights from parents of children with special educational needs and educational practitioners. *British Journal of Special Education, 40*(1), 14–21. <https://doi.org/10.1111/1467-8578.12012>
- Brunsting, N. C., Sreckovic, M. A., & Lane, K. L. (2014). Special education teacher burnout: A synthesis of research from 1979 to 2013. *Education and Treatment of Children, 37*(4), 681–711. <https://doi.org/10.1353/etc.2014.0032>

- Bussing, R., Gary, F. A., Leon, C. E., Garvan, C. W., & Reid, R. (2002). General classroom teachers' information and perceptions of attention deficit hyperactivity disorder. *Behavioral Disorders, 27*(4), 327–339. <https://doi.org/10.1177/019874290202700402>
- Cabral, M. D., Liu, S., & Soares, N. (2020). Attention-deficit/hyperactivity disorder: diagnostic criteria, epidemiology, risk factors and evaluation in youth. *Translational Pediatrics, 9*(S1), S104–S113. <https://doi.org/10.21037/tp.2019.09.08>
- Campbell, S. B., Halperin, J. M., & Sonuga-Barke, E. (2014). A Developmental Perspective on Attention-Deficit/Hyperactivity Disorder (ADHD). In *Springer eBooks* (pp. 427–448). https://doi.org/10.1007/978-1-4614-9608-3_22
- Carpenter, L., & Austin, H. (2008). How to be recognized enough to be included? *International Journal of Inclusive Education, 12*(1), 35–48. <https://doi.org/10.1080/13603110701683170>
- Chang, Z., Ghirardi, L., Quinn, P. D., Asherson, P., D'Onofrio, B. M., & Larsson, H. (2019). Risks and benefits of Attention-Deficit/Hyperactivity Disorder medication on behavioral and neuropsychiatric outcomes: A qualitative review of pharmacoepidemiology studies using linked prescription databases. *Biological Psychiatry, 86*(5), 335–343. <https://doi.org/10.1016/j.biopsych.2019.04.009>
- Chaplin, S. (2018). Attention deficit hyperactivity disorder: diagnosis and management. *Progress in Neurology and Psychiatry, 22*(3), 27–29. <https://doi.org/10.1002/pnp.511>
- Chaves, A., Arnáez, S., Roncero, M., & García-Soriano, G. (2021). Teachers' knowledge and stigmatizing attitudes associated with obsessive-compulsive disorder: Effectiveness of a brief educational intervention. *Frontiers in Psychiatry, 12*. <https://doi.org/10.3389/fpsyt.2021.677567>

Chen, H., Chen, W., Song, Y., Sun, L., & Li, X. (2019). EEG characteristics of children with attention-deficit/hyperactivity disorder. *Neuroscience*, *406*, 444–456.

<https://doi.org/10.1016/j.neuroscience.2019.03.048>

Chen, H., Song, Y., & Li, X. (2019). A deep learning framework for identifying children with ADHD using an EEG-based brain network. *Neurocomputing*, *356*, 83–96.

<https://doi.org/10.1016/j.neucom.2019.04.058>

Cicek, G., & Akan, A. (2021). Deep learning approach versus traditional machine learning for ADHD classification. *IEEE Xplore*. <https://doi.org/10.1109/tiptekno53239.2021.9632940>

Conrad, P., & Potter, D. (2000). From hyperactive children to ADHD adults: Observations on the expansion of medical categories. *Social Problems*, *47*(4), 559–582.

<https://doi.org/10.2307/3097135>

Cornett-Ruiz, S., & Hendricks, B. C. (1993). Effects of labeling and ADHD behaviors on peer and teacher judgments. *Journal of Educational Research*, *86*(6), 349–355.

<https://doi.org/10.1080/00220671.1993.9941228>

Cothran, D. J., Kulinna, P. H., & Garrahy, D. A. (2009). Attributions for and consequences of student misbehavior. *Physical Education and Sport Pedagogy*, *14*(2), 155–167.

<https://doi.org/10.1080/17408980701712148>

Creswell, J. W., & Poth, C. (2018). *Qualitative Inquiry and research design: choosing among five approaches*.

https://openlibrary.org/books/OL28633749M/Qualitative_Inquiry_and_Research_Design

Currie, J., & Stabile, M. (2006). Child mental health and human capital accumulation: The case of ADHD. *Journal of Health Economics*, *25*(6), 1094–1118.

<https://doi.org/10.1016/j.jhealeco.2006.03.001>

Daley, D., & Birchwood, J. (2010). ADHD and academic performance: why does ADHD impact on academic performance and what can be done to support ADHD children in the classroom? *Child Care Health and Development*, 36(4), 455–464.

<https://doi.org/10.1111/j.1365-2214.2009.01046.x>

Danielson, M. L., Visser, S. N., Chronis-Tuscano, A., & DuPaul, G. J. (2018). A National Description of Treatment among United States Children and Adolescents with Attention-Deficit/Hyperactivity Disorder. *The Journal of Pediatrics*, 192, 240-246.e1.

<https://doi.org/10.1016/j.jpeds.2017.08.040>

Data and statistics about ADHD. (2021). Centers for Disease Control and Prevention.

<https://www.cdc.gov/ncbddd/adhd/data.html>

Day, C. T. (2021). Expectancy Value Theory as a tool to explore teacher beliefs and motivations in elementary mathematics instruction. *International Electronic Journal of Elementary Education*, 13(2), 169–182. <https://doi.org/10.26822/iejee.2021.182>

deBettencourt, L. U. (2002). Understanding the differences between IDEA and Section 504.

Teaching Exceptional Children. <https://doi.org/10.1177/004005990203400302>

Dort, M., Strelow, A. E., Schwinger, M., & Christiansen, H. (2020). What teachers think and know about ADHD: Validation of the ADHD-school-expectation questionnaire (ASE).

International Journal of Disability Development and Education, 69(6), 1905–1918.

<https://doi.org/10.1080/1034912x.2020.1843142>

DuPaul, G. J., Evans, S. W., Mautone, J. A., Owens, J. S., & Power, T. J. (2020). Future Directions for Psychosocial Interventions for Children and Adolescents with ADHD.

Journal of Clinical Child and Adolescent Psychology, 49(1), 134–145.

<https://doi.org/10.1080/15374416.2019.1689825>

- DuPaul, G. J., Gormley, M. J., & Laracy, S. D. (2012). Comorbidity of LD and ADHD. *Journal of Learning Disabilities, 46*(1), 43–51. <https://doi.org/10.1177/0022219412464351>
- DuPaul, G. J., & Stoner, G. (2014). *ADHD in the Schools, third edition: Assessment and Intervention Strategies*. Guilford Publications.
- DuPaul, G. J., & Weyandt, L. L. (2006). School-based intervention for children with attention deficit hyperactivity disorder: Effects on academic, social, and behavioural functioning. *International Journal of Disability Development and Education, 53*(2), 161–176. <https://doi.org/10.1080/10349120600716141>
- DuPaul, G. J., Weyandt, L. L., & Janusis, G. M. (2011). ADHD in the Classroom: Effective Intervention Strategies. *Theory Into Practice, 50*(1), 35–42. <https://doi.org/10.1080/00405841.2011.534935>
- Ekstam, U., Korhonen, J., Linnanmäki, K., & Aunio, P. (2017). Special education pre-service teachers' interest, subject knowledge, and teacher efficacy beliefs in mathematics. *Teaching and Teacher Education, 63*, 338–345. <https://doi.org/10.1016/j.tate.2017.01.009>
- Evans, S. W., Owens, J. S., & Bunford, N. (2014). Evidence-Based Psychosocial Treatments for Children and Adolescents with Attention-Deficit/Hyperactivity Disorder. *Journal of Clinical Child and Adolescent Psychology, 43*(4), 527–551. <https://doi.org/10.1080/15374416.2013.850700>
- Excellence, N. I. F. H. a. C. (2019). *Attention deficit hyperactivity disorder: Diagnosis and Management*.
- Fabiano, G. A., Pelham, W. E., Coles, E. K., Gnagy, E. M., Chronis-Tuscano, A., & O'Connor, B. (2009). A meta-analysis of behavioral treatments for attention-deficit/hyperactivity

disorder. *Clinical Psychology Review*, 29(2), 129–140.

<https://doi.org/10.1016/j.cpr.2008.11.001>

Fabiano, G. A., Vujnovic, R. K., Pelham, W. E., Waschbusch, D. A., Massetti, G. M., Pariseau, M. E., Naylor, J., Yu, J., Robins, M., Carnefix, T., Greiner, A. R., & Volker, M. A.

(2010). Enhancing the effectiveness of special education programming for children with attention deficit hyperactivity disorder using a daily report card. *School Psychology Review*, 39(2), 219–239. <https://doi.org/10.1080/02796015.2010.12087775>

Flower, A., McKenna, J., & Haring, C. (2016). Behavior and classroom management: Are teacher preparation programs really preparing our teachers? *Preventing School Failure*, 61(2), 163–169. <https://doi.org/10.1080/1045988x.2016.1231109>

Fossum, S., Mørch, W., Handegård, B. H., Drugli, M. B., & Larsson, B. (2009). Parent training for young Norwegian children with ODD and CD problems: Predictors and mediators of treatment outcome. *Scandinavian Journal of Psychology*, 50(2), 173–181.

<https://doi.org/10.1111/j.1467-9450.2008.00700.x>

Freeman, J. L., Simonsen, B., Briere, D. E., & MacSuga-Gage, A. S. (2014). Pre-Service teacher training in classroom management. *Teacher Education and Special Education*, 37(2), 106–120. <https://doi.org/10.1177/0888406413507002>

Frondelius, I. A., Ranjbar, V., & Danielsson, L. (2019). Adolescents' experiences of being diagnosed with attention deficit hyperactivity disorder: a phenomenological study conducted in Sweden. *BMJ Open*, 9(8), e031570. <https://doi.org/10.1136/bmjopen-2019-031570>

Gesser-Edelsburg, A., & Boukai, R. H. (2019). Does the education system serve as a persuasion agent for recommending ADHD diagnosis and medication uptake? A qualitative case

- study to identify and characterize the persuasion strategies of Israeli teachers and school counselors. *BMC Psychiatry*, 19(1). <https://doi.org/10.1186/s12888-019-2120-9>
- Greene, R. W., Beszterczey, S., Katzenstein, T. L., Park, S. H., & Goring, J. C. (2002). Are Students with ADHD More Stressful to Teach? *Journal of Emotional and Behavioral Disorders*, 10(2), 79–89. <https://doi.org/10.1177/10634266020100020201>
- Gu, Y., Miao, S., Han, J., Liang, Z., Ouyang, G., Yang, J., & Li, X. (2018). Identifying ADHD children using hemodynamic responses during a working memory task measured by functional near-infrared spectroscopy. *Journal of Neural Engineering*, 15(3), 035005. <https://doi.org/10.1088/1741-2552/aa9ee9>
- Gwernan-Jones, R., Moore, D. A., Garside, R., Richardson, M., Thompson-Coon, J., Rogers, M., Cooper, P., Stein, K., & Ford, T. (2015). ADHD, parent perspectives and parent-teacher relationships: grounds for conflict. *British Journal of Special Education*, 42(3), 279–300. <https://doi.org/10.1111/1467-8578.12087>
- Hanwella, R., Senanayake, M. P., & De Silva, V. (2011). Comparative efficacy and acceptability of methylphenidate and atomoxetine in treatment of attention deficit hyperactivity disorder in children and adolescents: a meta-analysis. *BMC Psychiatry*, 11(1). <https://doi.org/10.1186/1471-244x-11-176>
- Harper, G. (2016). The ADHD explosion: Myths, medication, money, and today's push for performance by Stephen P. Hinshaw and Richard M. Scheffler; New York, Oxford University Press, 2014, 254 pages. *Psychiatric Services*, 67(5), e5. <https://doi.org/10.1176/appi.ps.670604>

- Havey, J. M. (2007). A comparison of Dutch and US teachers' perceptions of the incidence and management of ADHD. *School Psychology International*, 28(1), 46–52.
<https://doi.org/10.1177/0143034307075679>
- Havey, J. M., Olson, J. M., McCormick, C., & Cates, G. L. (2005). Teachers' perceptions of the incidence and management of attention-deficit hyperactivity disorder. *Applied Neuropsychology*, 12(2), 120–127. https://doi.org/10.1207/s15324826an1202_7
- Hibbitts, P. M. (2009). *We do this for the next child: a mother's phenomenological auto narrative inquiry into experiencing her children's schools*. <https://summit.sfu.ca/item/9386>
- Hoagwood, K., Kelleher, K. J., Zima, B. T., Perrin, J. M., Bilder, S., & Crystal, S. (2016). Ten-Year trends in treatment services for children with attention deficit hyperactivity disorder enrolled in medicaid. *Health Affairs*, 35(7), 1266–1270.
<https://doi.org/10.1377/hlthaff.2015.1423>
- Honkasilta, J., Vehkakoski, T., & Vehmas, S. (2016). 'The teacher almost made me cry' Narrative analysis of teachers' reactive classroom management strategies as reported by students diagnosed with ADHD. *Teaching and Teacher Education*, 55, 100–109.
<https://doi.org/10.1016/j.tate.2015.12.009>
- Individuals with Disabilities Education Act. (2019, November 7). *Section 1412 - Individuals with Disabilities Education Act*. Individuals With Disabilities Education Act.
<https://sites.ed.gov/idea/statute-chapter-33/subchapter-ii/1412/>
- Jangmo, A., Kuja-Halkola, R., Pérez-Vigil, A., Almqvist, C., Bulik, C. M., D'Onofrio, B. M., Lichtenstein, P., Ahnemark, E., Werner-Kiechle, T., & Larsson, H. (2021). Attention-deficit/hyperactivity disorder and occupational outcomes: The role of educational

- attainment, comorbid developmental disorders, and intellectual disability. *PLOS ONE*, 16(3), e0247724. <https://doi.org/10.1371/journal.pone.0247724>
- Jerome, L., Gordon, M. J., & Hustler, P. (1994). A Comparison of American and Canadian teachers' knowledge and attitudes towards attention deficit hyperactivity disorder (Adhd). *The Canadian Journal of Psychiatry*, 39(9), 563–567. <https://doi.org/10.1177/070674379403900909>
- Jones, M., Slate, O. R., Martinez-Garcia, C., & Moore, G. W. (2018). Differences in academic achievement by grade span configuration: a multiyear Texas investigation. *Journal of Advances in Education Research*. <https://doi.org/10.22606/jaer.2018.32001>
- Kaminski, J. W., & Claussen, A. H. (2017). Evidence Base Update for Psychosocial Treatments for Disruptive Behaviors in Children. *Journal of Clinical Child and Adolescent Psychology*, 46(4), 477–499. <https://doi.org/10.1080/15374416.2017.1310044>
- Kent, K. M., Pelham, W. E., Molina, B. S. G., Sibley, M. H., Waschbusch, D. A., Yu, J., Gnagy, E. M., Biswas, A., Babinski, D. E., & Karch, K. M. (2011). The academic experience of male high school students with ADHD. *Journal of Abnormal Child Psychology*, 39(3), 451–462. <https://doi.org/10.1007/s10802-010-9472-4>
- Kern, A., & Seabi, J. (2008). Educators' perceptions of attention deficit hyperactivity disorder: An exploratory study. *Journal of Psychology in Africa*, 18(4), 641–644. <https://doi.org/10.1080/14330237.2008.10820246>
- Kian, N., Samieefar, N., & Rezaei, N. (2022). Prenatal risk factors and genetic causes of ADHD in children. *World Journal of Pediatrics*, 18(5), 308–319. <https://doi.org/10.1007/s12519-022-00524-6>

- Kieling, C., Gonçalves, R. R. F., Tannock, R., & Castellanos, F. X. (2008). Neurobiology of attention deficit hyperactivity Disorder. *Child and Adolescent Psychiatric Clinics of North America*, 17(2), 285–307. <https://doi.org/10.1016/j.chc.2007.11.012>
- Kiely, B., & Adesman, A. (2015). What we do not know about ADHD. . . yet. *Current Opinion in Pediatrics*, 27(3), 395–404. <https://doi.org/10.1097/mop.0000000000000229>
- Kikas, E., & Timoštšuk, I. (2016). Student teachers' knowledge about children with ADHD and depression and its relations to emotions. *Emotional and Behavioural Difficulties*, 21(2), 190–204. <https://doi.org/10.1080/13632752.2015.1069086>
- Kos, J., & Richdale, A. L. (2004). The history of attention- deficit/hyperactivity disorder. *Australian Journal of Learning Disabilities*, 9(1), 22–24. <https://doi.org/10.1080/19404150409546751>
- Kos, J., Richdale, A. L., & Hay, D. (2006). Children with Attention Deficit Hyperactivity Disorder and their Teachers: A review of the literature. *International Journal of Disability Development and Education*, 53(2), 147–160. <https://doi.org/10.1080/10349120600716125>
- Kos, J., Richdale, A. L., & Jackson, M. (2004). Knowledge about Attention-Deficit/Hyperactivity Disorder: A comparison of in-service and preservice teachers. *Psychology in the Schools*, 41(5), 517–526. <https://doi.org/10.1002/pits.10178>
- Kulinna, P. H. (2008). Teachers' attributions and strategies for student misbehavior. *The Journal of Classroom Interaction*, 42(2), 21–30. <https://files.eric.ed.gov/fulltext/EJ829002.pdf>
- Kurth, J. A., & Forber-Pratt, A. J. (2017). Views of inclusive education from the perspectives of preservice and mentor teachers. *Inclusion*, 5(3), 189–202. <https://doi.org/10.1352/2326-6988-5.3.189>

- Langberg, J. M., Vaughn, A. J., Williamson, P., Epstein, J. N., Girio-Herrera, E., & Becker, S. P. (2011). Refinement of an organizational skills intervention for adolescents with ADHD for implementation by school mental health providers. *School Mental Health*, 3(3), 143–155. <https://doi.org/10.1007/s12310-011-9055-8>
- Lange, K. W., Reichl, S., Lange, K., Tucha, L., & Tucha, O. (2010). The history of attention deficit hyperactivity disorder. *Adhd Attention Deficit and Hyperactivity Disorders*, 2(4), 241–255. <https://doi.org/10.1007/s12402-010-0045-8>
- Langley, A. K., Nadeem, E., Kataoka, S. H., Stein, B. D., & Jaycox, L. H. (2010). Evidence-Based Mental Health Programs in Schools: Barriers and Facilitators of Successful implementation. *School Mental Health*, 2(3), 105–113. <https://doi.org/10.1007/s12310-010-9038-1>
- Lavigne, J. V., LeBailly, S. A., Gouze, K. R., Cicchetti, C., Jessup, B. W., Arend, R., Pochyly, J., & Binns, H. J. (2008). Predictor and moderator effects in the treatment of oppositional defiant disorder in pediatric primary care. *Journal of Pediatric Psychology*, 33(5), 462–472. <https://doi.org/10.1093/jpepsy/jsm075>
- Lawrence, K., Dawson, R. M., & McCormick, J. (2017). Teachers' experiences with and perceptions of students with attention deficit/hyperactivity disorder. *Journal of Pediatric Nursing*, 36, 141–148. <https://doi.org/10.1016/j.pedn.2017.06.010>
- Lazarides, R., Buchholz, J., & Rubach, C. (2018). Teacher enthusiasm and self-efficacy, student-perceived mastery goal orientation, and student motivation in mathematics classrooms. *Teaching and Teacher Education*, 69, 1–10. <https://doi.org/10.1016/j.tate.2017.08.017>

- Lee, J. (2014). Predictors of teachers' intention to refer students with ADHD to mental health professionals: Comparison of U.S. and South Korea. *School Psychology Quarterly*, 29(4), 385–394. <https://doi.org/10.1037/spq0000046>
- Lev, A., Braw, Y., Elbaum, T., Wagner, M., & Rasseovsky, Y. (2022). Eye tracking during a Continuous Performance Test: Utility for assessing ADHD patients. *Journal of Attention Disorders*, 26(2), 245–255. <https://doi.org/10.1177/1087054720972786>
- Lewis, M., & Rudolph, K. D. (2014). *Handbook of Developmental Psychopathology*. Springer.
- Liang, L., & Gao, X. (2016). Pre-service and in-service secondary school teachers' knowledge about attention-deficit hyperactivity disorder (ADHD) and attitudes toward students with ADHD. *International Journal of Disability Development and Education*, 63(3), 369–383. <https://doi.org/10.1080/1034912x.2015.1123231>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE.
- Malmqvist, J. (2018). Has schooling of ADHD students reached a crossroads? *Emotional and Behavioural Difficulties*, 23(4), 389–409. <https://doi.org/10.1080/13632752.2018.1462974>
- Margalit, M. (2010). *Mothers' voices on the internet: Stress, support and perceptions of mothers of children with learning disabilities and attention deficit/hyperactivity disorder*. Learning & Technology Library (LearnTechLib). <https://www.learntechlib.org/p/108124/>
- Marino, C., Cardillo, R., Canale, N., Lenzi, M., Bergamin, M., Bonichini, S., & Santinello, M. (2021). Decreasing youth hyperactivity and inattention problems through mentoring: Evaluation of the Mentor-UP program. *DOAJ (DOAJ: Directory of Open Access Journals)*. <https://doi.org/10.3389/feduc.2021.702539>

- Martin, A. J. (2014). The role of ADHD in academic adversity: Disentangling ADHD effects from other personal and contextual factors. *School Psychology Quarterly*, 29(4), 395–408. <https://doi.org/10.1037/spq0000069>
- Maughan, E. D., McCarthy, A. M., Hein, M., Perkhounkova, Y., & Kelly, M. (2018). Medication management in schools: 2015 survey results. *Journal of School Nursing*, 34(6), 468–479. <https://doi.org/10.1177/1059840517729739>
- Mautone, J. A., Marcelle, E. T., Tresco, K. E., & Power, T. J. (2015). ASSESSING THE QUALITY OF PARENT-TEACHER RELATIONSHIPS FOR STUDENTS WITH ADHD. *Psychology in the Schools*, 52(2), 196–207. <https://doi.org/10.1002/pits.21817>
- McCabe, S. E., Dickinson, K., West, B. T., & Wilens, T. E. (2016). Age of Onset, Duration, and Type of Medication Therapy for Attention-Deficit/Hyperactivity Disorder and Substance Use during Adolescence: a Multi-Cohort National study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 55(6), 479–486. <https://doi.org/10.1016/j.jaac.2016.03.011>
- McKenna, J., & Ciullo, S. (2016). Typical reading instructional practices provided to students with emotional and behavioral disorders in a residential and day treatment setting: a mixed methods study. *Residential Treatment for Children & Youth*, 33(3–4), 225–246. <https://doi.org/10.1080/0886571x.2016.1207217>
- McKenna, J., Shin, M., & Ciullo, S. (2015). Evaluating reading and mathematics instruction for students with learning disabilities. *Learning Disability Quarterly*, 38(4), 195–207. <https://doi.org/10.1177/0731948714564576>

- McKown, C., & Weinstein, R. S. (2008). Teacher expectations, classroom context, and the achievement gap. *Journal of School Psychology, 46*(3), 235–261.
<https://doi.org/10.1016/j.jsp.2007.05.001>
- MedlinePlus. (2022). *MedlinePlus - Health information from the National Library of Medicine*. <https://medlineplus.gov/>
- Meerman, S. T., Batstra, L., Grietens, H., & Frances, A. (2017). ADHD: a critical update for educational professionals. *International Journal of Qualitative Studies on Health and Well-being, 12*(sup1), 1298267. <https://doi.org/10.1080/17482631.2017.1298267>
- Metzger, A. N., & Hamilton, L. T. (2021). The stigma of ADHD: Teacher ratings of labeled students. *Sociological Perspectives, 64*(2), 258–279.
<https://doi.org/10.1177/0731121420937739>
- Mick, E., Biederman, J., Prince, J. B., Fischer, M. J., & Faraone, S. V. (2002). Impact of low birth weight on Attention-Deficit Hyperactivity Disorder. *Journal of Developmental and Behavioral Pediatrics, 23*(1), 16–22. <https://doi.org/10.1097/00004703-200202000-00004>
- Mohr-Jensen, C. M., Steen-Jensen, T., Bang-Schnack, M., & Thingvad, H. (2019). What do primary and secondary school teachers know about ADHD in children? Findings from a systematic review and a representative, nationwide sample of Danish teachers. *Journal of Attention Disorders, 23*(3), 206–219. <https://doi.org/10.1177/1087054715599206>
- Moore, D. A., Russell, A. E., Arnell, S., & Ford, T. (2017). Educators' experiences of managing students with ADHD: A qualitative study. *Child Care Health and Development, 43*(4), 489–498. <https://doi.org/10.1111/cch.12448>
- Moustakas, C. (1994). *Phenomenological research methods*. SAGE Publications.

- Mulholland, S., Cumming, T. M., & Jung, J. Y. (2015). Teacher attitudes towards students who exhibit ADHD-Type behaviours. *Australasian Journal of Special Education*, 39(1), 15–36. <https://doi.org/10.1017/jse.2014.18>
- Norvilitis, J. M., & Fang, P. (2005). Perceptions of ADHD in China and the United States: A preliminary study. *Journal of Attention Disorders*, 9(2), 413–424. <https://doi.org/10.1177/1087054705281123>
- Ohan, J. L., Cormier, N., Hepp, S. L., Visser, T. a. W., & Strain, M. C. (2008). Does knowledge about attention-deficit/hyperactivity disorder impact teachers' reported behaviors and perceptions? *School Psychology Quarterly*, 23(3), 436–449. <https://doi.org/10.1037/1045-3830.23.3.436>
- Ohan, J. L., Visser, T. a. W., Strain, M. C., & Allen, L. (2011). Teachers' and education students' perceptions of and reactions to children with and without the diagnostic label "ADHD." *Journal of School Psychology*, 49(1), 81–105. <https://doi.org/10.1016/j.jsp.2010.10.001>
- Oliver, R. M., & Reschly, D. J. (2010). Special education teacher preparation in classroom management: Implications for students with emotional and behavioral disorders. *Behavioral Disorders*, 35(3), 188–199. <https://doi.org/10.1177/019874291003500301>
- Owens, E. B., Hinshaw, S. P., McBurnett, K., & Pfiffner, L. J. (2018). Predictors of response to behavioral treatments among children with ADHD-Inattentive type. *Journal of Clinical Child and Adolescent Psychology*, 47(sup1), S219–S232. <https://doi.org/10.1080/15374416.2016.1228461>
- Park, S. J., & Park, W. J. (2017). Development and Effects of an Instructional Coaching Program Regarding Children with Attention Deficit Hyperactivity Disorder for Elementary School

- Teachers. *Journal of Korean Academy of Nursing*. <https://doi.org/10.4040/jkan.2017.47.3.305>
- Parke, E., Becker, M. L., Graves, S., Baily, A. R., Paul, M. G., Freeman, A. J., & Allen, D. N. (2021). Social cognition in children with ADHD. *Journal of Attention Disorders*, 25(4), 519–529. <https://doi.org/10.1177/1087054718816157>
- Past and present perceptions towards disability: A historical perspective*. (2012). *Disability Studies Quarterly*. <http://dsq-sds.org/article/view/3197/3068>
- Pelham, W. E., Fabiano, G. A., Waxmonsky, J. G., Greiner, A. R., Gnagy, E. M., Coxe, S., Verley, J., Bhatia, I., Hart, K., Karch, K. M., Konijnendijk, E., Tresco, K. E., Nahum-Shani, I., & Murphy, S. A. (2016). Treatment sequencing for childhood ADHD: A Multiple-Randomization study of adaptive medication and behavioral interventions. *Journal of Clinical Child and Adolescent Psychology*, 45(4), 396–415. <https://doi.org/10.1080/15374416.2015.1105138>
- Power, T. J., Hom, J., & Huang, P. (2018). Current Best practices for assessing and treating children and Adolescents with Attention-Deficit/Hyperactivity Disorder. *Current Treatment Options in Pediatrics*. <https://doi.org/10.1007/s40746-018-0111-6>
- Poznanski, B., Hart, K., & Cramer, E. (2018). Are teachers ready? Preservice teacher knowledge of classroom management and ADHD. *School Mental Health*, 10(3), 301–313. <https://doi.org/10.1007/s12310-018-9259-2>
- Protecting students with disabilities*. (2020). <https://www2.ed.gov/about/offices/list/ocr/504faq.html>
- Rahman, S., Takahashi, N., Iwabuchi, T., Nishimura, T., Harada, T., Okumura, A., Takei, N., Nomura, Y., & Tsuchiya, K. J. (2021). Elevated risk of attention deficit hyperactivity

- disorder (ADHD) in Japanese children with higher genetic susceptibility to ADHD with a birth weight under 2000 g. *BMC Medicine*, 19(1). <https://doi.org/10.1186/s12916-021-02093-3>
- Reid, R. (1994). An analysis of teachers' perceptions of Attention Deficit-Hyperactivity Disorder. *Journal of Research and Development in Education*, 27(3), 195–202. <https://eric.ed.gov/?id=EJ488804>
- Reinke, W. M., Lewis-Palmer, T., & Merrell, K. W. (2008). The classroom check-up: A classwide teacher consultation model for increasing praise and decreasing disruptive behavior. *School Psychology Review*, 37(3), 315–332. <https://doi.org/10.1080/02796015.2008.12087879>
- Rodríguez, C., Areces, D., García, T., Cueli, M., & Castro, P. G. (2018). Comparison between two continuous performance tests for identifying ADHD: Traditional vs. virtual reality. *International Journal of Clinical and Health Psychology*, 18(3), 254–263. <https://doi.org/10.1016/j.ijchp.2018.06.003>
- Sandberg, S. (1996). Hyperactivity disorders of childhood. In *Cambridge University Press eBooks*. <http://ci.nii.ac.jp/ncid/BA29483089>
- Saul, R. (2014). *ADHD Does not Exist: The Truth About Attention Deficit and Hyperactivity Disorder*. Harper Collins.
- Schatz, N. K., Fabiano, G. A., Raiker, J. S., Hayes, T. B., & Pelham, W. E. (2021). Twenty-year trends in elementary teachers' beliefs about best practices for students with ADHD. *School Psychology*, 36(4), 203–213. <https://doi.org/10.1037/spq0000442>

- Schnoes, C. J., Reid, R., Wagner, M., & Marder, C. (2006). ADHD among Students Receiving Special Education Services: A National Survey. *Exceptional Children, 72*(4), 483–496. <https://doi.org/10.1177/001440290607200406>
- Sciutto, M. J., Terjesen, M. D., & Frank, A. S. B. (2000). Teachers' knowledge and misperceptions of attention-deficit/hyperactivity disorder. *Psychology in the Schools, 37*(2), 115–122. [https://doi.org/10.1002/\(sici\)1520-6807\(200003\)37:2](https://doi.org/10.1002/(sici)1520-6807(200003)37:2)
- Shelemy, L., Harvey, K., & Waite, P. (2019). Supporting students' mental health in schools: what do teachers want and need? *Emotional and Behavioural Difficulties, 24*(1), 100–116. <https://doi.org/10.1080/13632752.2019.1582742>
- Sheridan, S. M., & Gutkin, T. B. (2000). The ecology of school psychology: Examining and changing our paradigm for the 21st century. *School Psychology Review, 29*(4), 485–502. <https://doi.org/10.1080/02796015.2000.12086032>
- Sibley, M. H., Swanson, J. M., Arnold, L. E., Hechtman, L., Owens, E. B., Stehli, A., Abikoff, H., Hinshaw, S. P., Molina, B. S. G., Mitchell, J. T., Jensen, P. S., Howard, A. L., Lakes, K. D., & Pelham, W. E. (2017). Defining ADHD symptom persistence in adulthood: optimizing sensitivity and specificity. *Journal of Child Psychology and Psychiatry, 58*(6), 655–662. <https://doi.org/10.1111/jcpp.12620>
- Silverman, W. K., & Hinshaw, S. P. (2008). The second special issue on evidence-based psychosocial treatments for children and adolescents: A 10-Year update. *Journal of Clinical Child and Adolescent Psychology, 37*(1), 1–7. <https://doi.org/10.1080/15374410701817725>

- Sluiter, M., Wienen, A. W., Thoutenhoofd, E., Doornenbal, J., & Batstra, L. (2019). Teachers' role and attitudes concerning ADHD medication: A qualitative analysis. *Psychology in the Schools*. <https://doi.org/10.1002/pits.22270>
- Soneson, E., Howarth, E., Ford, T., Humphrey, A., Jones, P. B., Coon, J. T., Rogers, M., & Anderson, J. (2020). Feasibility of School-Based Identification of Children and Adolescents Experiencing, or At-risk of Developing, Mental Health Difficulties: a Systematic Review. *Prevention Science*, 21(5), 581–603. <https://doi.org/10.1007/s11121-020-01095-6>
- Soroa, M., Gorostiaga, A., & Balluerka, N. (2015). Teachers' knowledge of ADHD: Relevance of training and individual perceptions // conocimiento de los maestros sobre el TDAH: Relevancia de la formación y de las percepciones individuales. *Revista De Psicodidactica*, 21(2), 205–226. <https://doi.org/10.1387/revpsicodidact.14023>
- Still, G. F. (2006). Some abnormal psychological conditions in children. *Journal of Attention Disorders*, 10(2), 126–136. <https://doi.org/10.1177/1087054706288114>
- Strelow, A. E., Dort, M., Schwinger, M., & Christiansen, H. (2021). Influences on teachers' intention to apply classroom management strategies for students with ADHD: A model analysis. *Sustainability*, 13(5), 2558. <https://doi.org/10.3390/su13052558>
- Symptoms and diagnosis of ADHD* | CDC. (2022, July 26). Centers for Disease Control and Prevention. <https://www.cdc.gov/ncbddd/adhd/diagnosis.html>
- Thomas, R., Sanders, S., Doust, J., Beller, E., & Glasziou, P. (2015). Prevalence of Attention-Deficit/Hyperactivity Disorder: A systematic review and meta-analysis. *Pediatrics*, 135(4), e994–e1001. <https://doi.org/10.1542/peds.2014-3482>

- van Manen, M. (2016). *Phenomenology of practice: Meaning-Giving Methods in Phenomenological Research and Writing*. Routledge.
- Vishnevsky, T., & Beanlands, H. (2004). Qualitative research. *Nephrology nursing journal: Journal of the American Nephrology Nurses' Association*, *31*(2), 234–238.
- Volkow, N. D., Wang, G., Tomasi, D., Kollins, S. H., Wigal, T., Newcorn, J. H., Telang, F., Fowler, J. S., Logan, J., Wong, C., & Swanson, J. M. (2012). Methylphenidate-Elicited dopamine increases in ventral striatum are associated with Long-Term symptom improvement in adults with attention deficit hyperactivity disorder. *The Journal of Neuroscience*, *32*(3), 841–849. <https://doi.org/10.1523/jneurosci.4461-11.2012>
- Ward, R. J., Bristow, S., Kovshoff, H., Cortese, S., & Kreppner, J. (2022). The effects of ADHD teacher training programs on teachers and pupils: A systematic review and Meta-Analysis. *Journal of Attention Disorders*, *26*(2), 225–244. <https://doi.org/10.1177/1087054720972801>
- Wienen, A. W., Sluiter, M., Thoutenhoofd, E., De Jonge, P., & Batstra, L. (2019). The advantages of an ADHD classification from the perspective of teachers. *European Journal of Special Needs Education*, *34*(5), 649–662. <https://doi.org/10.1080/08856257.2019.1580838>
- Wigfield, A., & Eccles, J. S. (1992). The development of achievement task values: A theoretical analysis. *Developmental Review*, *12*(3), 265–310. [https://doi.org/10.1016/0273-2297\(92\)90011-p](https://doi.org/10.1016/0273-2297(92)90011-p)
- Wigfield, A., & Eccles, J. S. (2000). Expectancy–Value Theory of achievement motivation. *Contemporary Educational Psychology*, *25*(1), 68–81. <https://doi.org/10.1006/ceps.1999.1015>

- Wolraich, M. L., Hagan, J. F., Allan, C., Chan, E., Davison, D., Earls, M. F., Evans, S. W., Flinn, S. K., Froehlich, T. E., Frost, J., Holbrook, J., Lehmann, C. U., Lessin, H. R., Okechukwu, K., Pierce, K., Winner, J. D., & Zurhellen, W. (2019). Clinical Practice Guideline for the Diagnosis, evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. *Pediatrics*, *144*(4).
<https://doi.org/10.1542/peds.2019-2528>
- Xenofontos, C. (2018). *Equity in mathematics education: Addressing a Changing World*. IAP.
- Xu, G., Strathearn, L., Liu, B., Yang, B., & Bao, W. (2018). Twenty-Year trends in diagnosed attention-deficit/hyperactivity disorder among US children and adolescents, 1997-2016. *JAMA Network Open*, *1*(4), e181471.
<https://doi.org/10.1001/jamanetworkopen.2018.1471>
- Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods*. SAGE Publications.

Appendix A

IRB Approval Letter

LIBERTY UNIVERSITY.

INSTITUTIONAL REVIEW BOARD

May 4, 2023

Van Kirchhoff
Katelynn Wheeler

Re: IRB Exemption - IRB-FY22-23-1327 K-8 TEACHERS' EXPERIENCES INSTRUCTING STUDENTS DIAGNOSED WITH ADHD: A PHENOMENOLOGICAL STUDY

Dear Van Kirchhoff, Katelynn Wheeler,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information

electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, PhD, CIP

Administrative Chair

Research Ethics Office

Appendix B

Social Media Recruitment Letter

I am conducting research as part of the requirements for a Doctor of Philosophy degree at Liberty University. The purpose of my research is to describe the lived experiences of teachers who have experience working with students diagnosed with ADHD in the K-8 public school system in the Mid-Atlantic states of Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, and West Virginia. To participate, you must be a state-licensed K-8 public school teacher in one of the above-mentioned Mid-Atlantic states with 1 or more years of experience working with students diagnosed with ADHD. Participants must also be able to read, write, and speak English well. Participants, if willing, will be interviewed either virtually or in person (60 minutes, audio-recorded), take part in a virtual focus group (1.5 hours, audio-recorded), and respond to five journal prompt questions (30 minutes). If you would like to participate and meet the study criteria, please direct message me for more information. A consent document will be emailed to you one week before the interview, and if you choose to participate, you will need to sign and return it at the time of the interview.

Best regards,

Van Kirchhoff

Appendix C

Consent

Title of the Project: K-8 Teachers' Experiences Instructing Students Diagnosed with ADHD: A Phenomenological Study

Principal Investigator: Van Kirchhoff, Doctoral Candidate, School of Education, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be/have:

1. A state-licensed teacher in Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, or West Virginia.
2. Working in a public school system located in one of these Mid-Atlantic states.
3. At least one year of experience teaching students diagnosed with ADHD.
4. The ability to speak, read, and write English clearly.

Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of this phenomenological study is to describe the lived experiences of teachers who have experience working with students diagnosed with ADHD in the K-8 public school system in one of the Mid-Atlantic states of Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, or West Virginia.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Participate in a remote/virtual or in-person, audio-recorded interview that will take no more than 1 hour.
2. Participate in a remote/virtual focus group that will be audio-recorded and will take no more than 1.5 hours.
3. Answer five journal prompt questions that should take no more than 30 minutes.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include increased public knowledge on the topic of ADHD along with additional methods for which students diagnosed with ADHD can be supported in the classroom.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential through the use of pseudonyms
- Interviews will be conducted in a location where others will not easily overhear the conversation.
- Confidentiality cannot be guaranteed in focus group settings. While discouraged, other members of the focus group may share what was discussed with persons outside of the group.
- Data will be stored on a password-locked computer. After three years, all electronic records will be deleted.
- Recordings will be stored on a password-locked computer for three years and then erased. The researcher and members of his doctoral committee will have access to these recordings.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address or phone number included in the next paragraph. Should you choose to withdraw, data collected from you, apart from focus group data, will be destroyed immediately and will not be included in this study. Focus group data will not be destroyed, but your contributions to the focus group will not be included in the study if you choose to withdraw.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Van Kirchhoff. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at [REDACTED]. You may also contact the researcher's faculty sponsor, Dr. Katelynn Wheeler, at [REDACTED].

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the researcher using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

The researcher has my permission to audio-record me as part of my participation in this study.

Printed Subject Name

Signature & Date

Appendix D

Journal Prompts

1. What formal training did you receive to support students diagnosed with ADHD?
2. If you received formal training, do you feel that the training was sufficient? If not, then did you need to self-educate on ADHD topics?
3. What are the most important factors that prepare a teacher for success in teaching students diagnosed with ADHD?
4. What advice would you give to students who plan to teach students diagnosed with ADHD in the K-8 public school system?
5. What past experiences, if any, may sway you towards either psychostimulants or behavior modification as a therapy to support students diagnosed with ADHD?

Appendix E

Individual Interview Questions

1. Please give me a brief overview of your background, including what motivated you to enter the field of K-8 education.
2. How did your own K-8 classroom experiences help you to relate to any of the challenges faced by students diagnosed with ADHD? SQ1
3. How has your personal education affected your teaching style?
4. What support methods have you learned to use in an inclusive classroom environment that has students diagnosed with ADHD?
5. What has shaped your thinking more in the support of students diagnosed with ADHD, education or experience?
6. What behavior modification technique did you first use with a student diagnosed with ADHD?
7. Describe your first behavioral modification experience and how it related to your expectations for success?
8. What have you experienced that challenges your instruction of students diagnosed with ADHD?
9. What environmental changes have you created in your classroom as students diagnosed with ADHD in classrooms have increased?
10. How have your experiences with students diagnosed with ADHD changed your teaching philosophy over time?
11. How would you change the current school system for better support of students diagnosed with ADHD?

12. How have your beliefs and experiences shaped your views on the use of medication for students diagnosed with ADHD?
13. What side effects, such as in personality and learning, have you seen after medication of students diagnosed with ADHD?
14. What do you believe is driving the increase in students diagnosed with ADHD?
15. What would you include in a guidebook for future teachers about behavior modification techniques and medications used for support of students diagnosed with ADHD?

Appendix F

Focus Group Questions

1. Discuss what teaching method is most effective for students diagnosed with ADHD?
2. Discuss why either medications or behavioral modifications should be used first to support learning and behavior in students diagnosed with ADHD?
3. Discuss why medication may be necessary in the support of students diagnosed with ADHD?
4. Discuss the best behavior modification methods available to support students diagnosed with ADHD?
5. Discuss the best learning environment for students diagnosed with ADHD?