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Creating an Inclusive Media Center for Students with Autism Spectrum Disorder

by

Molly Lee

A Starred Paper

Submitted to the Graduate Faculty of

St. Cloud State University

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Abstract

The purpose of this research is to investigate how school librarians can help support students with Autism Spectrum Disorder. The research questions that were addressed in this paper are:

1. What strategies can library media specialists use to make the school library environment inclusive for students with autism spectrum disorder?
2. How can librarians help reduce student anxiety when entering the library?

The methods used for this research was an evaluation of selected research articles that were collected from *EbscoHost*, *the Illinois Library Association*, *School Library Journal*, and *Google Scholar*. Keywords and phrases that were used for this research were “Autism Spectrum Disorder and libraries”, “Autism and school libraries” and “librarians and patrons with autism”. Research was scarce of this subject.

The results show the importance of having a spaced that was universally designed to support all learners with thoughtful consideration to lighting, the physical space and clear signage. Having library staff that was trained with assistive technology and communication skills was also significant in the findings. Having a media program that was inclusive was also pivotal. The research also shows a strong need for professional development opportunities for all media center staff on how to best support a student with Autism Spectrum Disorder in the media center. The concluded results of the analysis of research available affirms the importance of having a school media center that is inclusive to all students by having a trained Library Media Specialist on staff that has a range of skills to help create an environment that is supportive to students with Autism Spectrum Disorder.

Table of Contents

	Page
List of Tables.....	6
Chapter	
I. Introduction.....	7
Introduction and Background.....	7
Research Problem.....	8
Purpose of Research.....	9
Significance of the Study.....	10
Limitations.....	11
Delimitations.....	11
Definition of Terms.....	12
Conclusion.....	13
II. Literature Review.....	14
Introduction.....	14
Methodology.....	14
Variables and Themes.....	16
Autism.....	16
Library Programming.....	18
Layout and Design of the Library.....	18
Student Anxieties.....	20
Communication and Understanding.....	20

Chapter	Page
Professional Development for School Librarians	22
Gaps in the Research.....	23
Conclusion.....	24
III. Methodology.....	25
Introduction.....	25
Institutional Review Board Exemption.....	25
Methodology.....	26
Timeline.....	27
Conclusion.....	27
IV. Findings.....	29
Introduction.....	29
Summary of Findings.....	29
Inclusive Media Centers	33
Programming.....	35
Professional Development.....	36
Conclusion.....	36
V. Conclusions.....	37
Discussions and Conclusions.....	37
Discussion of the Findings.....	38
Limitations of the Study.....	38

	5
Chapter	Page
Implications of the Study.....	39
Suggestions for Further Research.....	39
Conclusion.....	40
References.....	42

List of Tables

Table	Page
Table 2.1 Summary of Background Research.....	15
Table 4.1 Summary of Analysis.....	30

Chapter I: Introduction

Introduction and Background

School libraries are an integral part of a learning community. They are a learning hub for students and staff; a place where individuals can grow as learners and lifelong readers. They are also a place of acceptance and equity for all patrons. The library media specialist (LMS), or school librarian, can create an environment that is welcoming and inclusive to all who enter. Librarianship as a whole, is a profession that is dedicated to the advancement and improvement of information access to all patrons (Edwards, 2018). School librarians can do this by looking at students as individuals, rather than generalizing the student population as they curate materials and build a learning environment in the media center.

The role of the library media specialist requires competency in several areas to address the needs of 21st century learners (American Association of School Librarians [AASL], 2009). School librarians find ways to integrate technology into school curriculum, collaborate with classroom teachers, and design lessons that focus on digital citizenship while simultaneously addressing the many literacies our students face today. Connecting students to exemplary literature that supports curriculum and interests' students in reading is a huge part of the school librarian's role in the school (AASL, 2009).

Additionally, Grassi (2018) states that:

Librarians also require competence in a variety of other disability-related areas as well. To communicate positively and effectively with their audience, librarians should have concrete knowledge of developmental needs, an appreciation of diversity, an

understanding of disabilities, strong interpersonal skills, inclusive customer service abilities and good judgment. (p. 364)

In 2020, the Center for Disease Control (CDC) found that approximately 1 in 54 children are diagnosed with autism spectrum disorder (ASD). Currently, ASD is the most prevalent developmental disorder and is four times more likely to occur in boys than in girls. “Autism spectrum disorder (ASD) is a developmental disability that can cause significant social, communication and behavioral challenges” (CDC, 2019). School librarians need to have awareness and understanding of ASD so that they can support all students in the library. There is a need more awareness on how to support students with ASD to ensure that the school library supports and welcomes the whole community. More research needs to be done regarding ASD and library services. This project will aim to explore how school library media specialists can help create a more inclusive library program to ensure a positive experience for all students.

Research Problem

School librarians need more information on how they can incorporate inclusion practices in the library environment to make sure that our spaces and resources are equitable to all learners. Adkins and Bushman (2015) conducted a survey to gather data on how libraries are offering services to support patrons with disabilities or special needs. The survey polled the most common disabilities librarians were asked to accommodate. Autism was noted as being one of the most common (Adkins & Bushman, 2015). Current research (Anderson & Everhart, 2015; Anderson, 2018; Edwards, 2018; Ennis-Cole & Smith, 2011; Ghuloum & Alycoub, 2016; Lawrence, 2018; Remy & Seaman, 2015; Shea & Derry 2019) offers insight on how school librarians can curate diverse collections and the importance of having spaces be compliant with

the Americans with Disabilities Act (ADA), but specifics do not include student interaction and strategies specific to a school library media specialist and patrons with ASD. The library is often thought of as a safe and welcoming place for people with ASD, however, librarians do not receive specific training on how to serve this population of patrons (Anderson & Everhart, 2015). Under the Individuals with Disabilities Education Act (IDEA) students with disabilities are entitled to a learning environment with that is the least restrictive (American Psychological Association [APA], 2020). A strong school library program can create a school culture of acceptance and inclusion; having supports in place to assist all learners. A library media specialist can assist students into seeing worlds beyond their own; through books and different forms of media. This can be so impactful in creating a school culture of kindness and understanding; something that can benefit all students in a school (Woolls et al., 2014). With having an integral role in the school community, it is imperative that more research is done on how the LMS can better support students with ASD.

Purpose of Research

The purpose of this research study is to identify inclusionary practices school library media specialists can do to create an environment that is conscious of learners with ASD. School librarians need to have a repertoire of skills in order to reach the needs of every student in a school (Curry Lance & Kachel, 2018). This research will analyze and discuss how a school librarian can help students with autism succeed in a 21st century library. There are two research questions that will be addressed:

3. What strategies can library media specialists use to make the school library environment inclusive for students with autism spectrum disorder?

4. How can librarians help reduce student anxiety when entering the library?

Significance of the Study

A library media specialist has a unique role in a school. They interact with every student, having the opportunity to impact their education greatly (Curry Lance & Kachel, 2018). By creating a welcoming atmosphere for students with autism, they can make a huge difference in the experience for someone who is on the spectrum. The studies that will be evaluated and synthesized in this study will help practicing library media specialists better serve students and staff members who have autism. Shea and Derry (2019) support this idea. “The service ethics and orientation of librarianship require creating inclusive and accessible environments for people with disabilities” (p. 327). This research is important to ensure that our libraries are inclusive and knowledgeable about how to make the library a place that is welcoming, informational, and not overwhelming for students on the autism spectrum. This knowledge about K-12 libraries can also help students with ASD with their college readiness skills. Shea and Derry (2019) write, “One growing trend that will potentially impact libraries is the increasing number of students entering higher education on the autism spectrum” (p. 326). Post-secondary education can help students with ASD strengthen self-advocacy skills, build self-efficacy, further their own education and prepare them for employment (Hart et al., 2010). College can also be a time to strengthen life and personal skills (Hart et al., 2010). Of course, not every student will want or need to go to college, but having the skills to adapt to change and transition into next stages in life is necessary for all individuals. Having a safe place to learn and grow is essential to every person. This further indicates the importance of a K-12 LMS to be knowledgeable about how to create a safe, welcoming environment to serve all students in the library. As Grassi (2018) stated:

Whether it is through customer service, programming, outreach or everyday conversations, librarians can provide these teens with a place in libraries. Through their actions and their words, librarians can recognize and validate these young adults for their interests, talents, strengths, and all of the qualities that make them a unique individual – not what makes them different. (p. 377)

Research on how to support and serve patrons with ASD should be vastly available to all library media specialists.

Limitations

There are several limitations to this study. The availability of scholarly reviewed articles are not prevalent on how school libraries can better accommodate students with ASD. All articles that were selected were written in the last ten years with the parameters set to full text online. This timeframe gave the most recent information and research available. A limitation that must be acknowledged is that there could be relevant articles that were written before that timeframe, although they would be less current information. Another limitation is that some articles focus on public libraries rather than school libraries. Public libraries and school libraries operate different and serve different populations of patrons. The collection development is more specific in K-12 education and there are more contact hours in a school setting where school librarians interact with all students.

Delimitations

The scarce research surrounding this topic in library media made the delimitations more extreme, however, creating them was important in order to have up to date information that would showcase current research for LMSs to learn from. Ideally, current research selected

would have been done within the last five years, but due to the lack of information on this topic, limiters were pushed back to the last ten years to get the more current information. The articles were chosen based on their relevance to this topic and acknowledgement in media programming opportunities for students with ASD. The articles chosen were specific to ASD, therefore, other exceptionalities were not the focus.

Definition of Terms

21st Century Skills: This term is used to “refer to certain core competencies such as collaboration, digital literacy, critical thinking, and problem-solving that advocates believe schools need to teach to help students thrive in today's world” (Rich, 2010).

21st Century Library Program: This term for this paper is referred to as a forward-thinking library program that supports teachers, school curriculum and integrates technology and digital citizenship. Additionally, the program fosters students as they become life-long learners (AASL, 2009).

Autism Spectrum Disorder (ASD): Autism spectrum disorder (ASD) is defined as a developmental disability that can cause significant social, communication and behavioral challenges (CDC, 2020).

Curriculum: The term curriculum refers to the lessons and academic content taught in a school or in a specific course or program (*Curriculum Definition*, 2015).

Exceptionalities: “A child who has an exceptionality has some area of functioning in which he or she is significantly different from an established norm. This definition includes both students with disabilities and those with special gifts or talents” (Belson, n.d.).

Library Media Specialist (LMS): “A library media specialist is authorized to provide to students in kindergarten through grade 12 instruction that is designed to provide information and technology literacy skills instruction, to lead, collaborate, and consult with other classroom teachers for the purpose of integrating information and technology literacy skills with content teaching, and to administer media center operations, programming, and resources” (Minnesota Legislature, 2017).

Literacies (or multiliteracies): A term used to describe the broad range of literacies students need to know in order to be successful 21st century learners. The multiple literacies include reading, writing, textual, visual, digital and technological (AASL, 2009).

Sensory: “...Neurophysiological responses to auditory, tactile, and visual stimuli” (Marco, Hinkley, Hill & Nagarajan, 2011).

Hypersensitivity: This can be a very uncomfortable feeling that persons may have when exposed to items, sounds or sensations. Hypersensitivity can cause anxiety, meltdowns or depression. (Clerkley, 2016).

Conclusion

The research review and analysis show more in depth what the K-12 media program can offer students who have ASD. The research will be presented as a means for other library media specialists to gain a stronger understanding of their role as school leaders who help create inclusive learning environments in the media center. LMSs have a unique role in a school where they touch the lives of all the children whom they serve. Being able to differentiate their programming, layout and instruction can help make a student with ASD reach their full potential and feel included in the school community (Grassi, 2018).

Chapter II: Literature Review

Introduction

The purpose of this paper is to help library media specialists better serve students who have autism spectrum disorder. Chapter two will focus on the research available on how school librarians can better assist students with this exceptionality. Autism is considered a spectrum disorder, and there are no two people on the spectrum who are exactly alike, however, individuals with ASD do share common characteristics (Geggle, 2016). Social interactions can be challenging and many people who have ASD have communication deficits (Geggle, 2016). Most people with ASD have difficulty making eye contact when talking to someone (Geggle, 2016). Reading body or facial gestures (nonverbal communication) is often a huge challenge for those with ASD (National Institute of Mental Health, 2018). School librarians should be aware of these characteristics to better serve and assist students who are on the spectrum. Additionally, the hope is that this research will offer programmatic ways that a school library media specialist can help serve this growing population of students.

Method

The research that was evaluated and selected for this topic was gathered from *EbscoHost*, *the Illinois Library Association*, *School Library Journal*, and *Google Scholar*. Keywords and phrases that were used for this research were “Autism Spectrum Disorder and libraries”, “Autism and school libraries” and “librarians and patrons with autism”. Research results were very limited with this topic. Since there has been an abundance of research done on autism spectrum disorders, originally only research done in the last five years was going to be chosen for this paper. Due to the sparse resources, that limiter had to go back ten years to gather more

information on this topic. All of the articles were chosen to have online full text readability, peer reviewed, with limitations of publications from 2010 to current.

Table 2.1 *Summary of Background Research*

Author	Year	<u>Variables Considered in the Study</u>					
		Identifying ASD	Library Program	Library Design	Transition & Anxiety	Communication & Understanding	PD
Anderson & Everhart	2015	X					X
Anderson	2018	X		X	X		
Edwards	2018		X	X		X	X
Ennis-Cole & Smith	2011					X	X
Ghuloum & Alycoub	2016	X	X				
Lawrence	2013		X	X			X
Remy & Seamon	2015	X		X	X		
Shea & Derry	2019	X		X	X	X	X

The articles all offered different pieces of information, which was gathered in the table above (Table 2.1). The purpose of this table is to identify gaps in research to see possible research opportunities for further studies on how school librarians can better assist students with autism in the library.

Variables and Themes

Although the research is very limited on this topic in a K-12 setting, there were common variables among the research articles. Understanding the meaning of autism was key in order to determine how best to support a school library patron who has autism. From there, communicating with students with autism led to understanding how to best assist with anxieties that one may experience when they transition into the library space (Anderson 2018; Shea and Derry 2019). One of the major triggers for anxiety is how the space is (layout, noise, signage, seating) arranged (Edwards, 2018; Lawrence, 2013; Shea & Derry, 2019). The majority of the articles (Anderson & Everhart, 2015; Edwards, 2018; Lawrence 2013; Shea & Derry, 2019) suggest avenues for librarians to explore for further professional development on how they can better assist students who have autism, but the resources are limited. Libraries are considered a safe place for students which gives librarians an important responsibility (Lawrence, 2013, p. 99). The emerging themes will be discussed further in this chapter.

Autism

Anderson and Everhart (2015) define autism as “a neurodevelopmental disorder, [that] causes difficulties in information processing. This can affect an individual's social behaviors and communication development, as well as his or her response to sensory stimuli” (p. 24). Similarly, The American Psychiatric Association (2013) stated autism is “Persistent deficits in social

communication and social interaction across multiple contexts” (p. 326). Having the definition of autism stated is the first major step in identifying patrons with ASD and thinking about the special considerations’ librarians need to be mindful of in order to better serve this population of library users (Shea & Derry, 2019). Individuals with ASD can have symptoms that exhibit different from others, but the characteristics are very similar. Those common characteristics are challenges with communication, strong need for routines in a daily schedule and sensitivity to changes that disrupt that daily routine (Anderson, 2018).

The deficits and characteristics of autism also can inhibit a student’s ability to transition into the library when they come in. School librarians need to have a strong understanding in order to help students with ASD feel welcome and succeed in the library. Edwards (2018) states:

Executive function and self-regulation are two other challenges that can affect autistic individuals’ social interactions. Essentially, executive function and self-regulation help people plan, prioritize, and complete tasks, while controlling their impulses and emotions. Autistic patrons who struggle with this may arrive late to an activity, not be well prepared or remember specific instructions, and not prioritize tasks well enough to complete an assignment or activity in a timely manner. (p. 2)

Understanding how the brain of a patron with autism is different than a patron who is neurotypical is beneficial for educators when it comes to teaching and providing library programming for students on the spectrum.

Library Programming

There are many ways that school librarians can build a program that supports all students with inclusive and intentional activities and experiences. One way to acknowledge this is to involve “meaningful collaborations with Autistics and with autistic-run organizations that promote self-advocacy” (Lawrence, 2013, p. 104). Additionally, neurotypical library patrons need to be considered with this intentional programming. It is incredibly effective in creating an inclusive environment and positive school culture, one where students are aware of differences and accept their peers (Lawrence, 2013).

Creating a program that is more inclusive towards students on the spectrum does not have to be difficult. Having sensory friendly items in the library can also help with environmental stimuli (noise cancelling headphones, fidgets, and weighted blankets). This can help a student stay better focused during lessons and activities (Edwards, 2018). Making sure that students have strong visuals in media lessons is ideal. Additionally, teaching students how to map the library will help ease anxieties as to where things are and how the space is laid out (Edwards, 2018, p. 3). Having a library collection that represents patrons on the spectrum (Ghuloum & Alycoub, 2016) can help promote inclusion, empathy and awareness.

Layout and Design of Library

Layout and design of the library is a huge part of any library patron’s experience in the space. When students come into the library, they should feel welcomed and at ease (Weisburg, 2018). Thinking about all users of the library is something that every school librarian needs to do. Making sure that our libraries are all accessible to learners is vital to creating a space that is inclusive for all. Edwards (2018) stated,

Studying the ADA guidelines and considering universal design (a method of making public spaces, including libraries, as accessible to as many people as possible) are strategies that any library can use to fulfill its mission of serving the full community. (p. 3)

With library design and layout, making sure things are not overwhelming is important to students who have ASD (Lawrence, 2013). Lighting, for instance, is a small change that can have a huge impact for all students; not just those who are on the autism spectrum (Anderson, 2018). Replacing fluorescent bulbs with sensory-friendly ones can alter the experience in the library for those with autism, migraines and/or other light sensitivities (Lawrence, 2013). With many libraries now becoming more contemporary. The downside of becoming more modern is that the lights can be harsh on those with sensitivities and the background noise becomes more of a disturbance (Remy & Seaman, 2014). Most people have filtering capabilities and may not be as sensitive to external stimuli; however, many with ASDs cannot “turn these off,” preventing them from concentrating on tasks and resulting in anxiety and exhaustion (Remy & Seaman, 2014).

The library is often described by students as being a safe place and has a positive impact on student learning (Weisburg, 2018). This experience that students have is not only just the interaction between the adults, but the space largely impacts the “feel” in the library. “The service ethics and orientation of librarianship require creating inclusive and accessible environments for people with disabilities” (Lawrence, 2013). Flexible furniture and spaces can be adaptable to individual learning and can help support all students' needs when they enter the library, using universal design (Pionke, 2017). Equally as important is still having quiet spaces for students. Students who have autism often struggle with sensory overload and need a space

where they can escape that stimuli and focus on academics (Shea & Derry, 2019). Quieter spaces can be calming for all who enter the library. Other ideas for creating more calming environments “include non-fluorescent lighting, improved signage, and incorporating principles of universal design” (Shea & Derry, 2019 p. 330).

Student Anxieties

Individuals with ASD “feel rejection more acutely than mainstream students as a result of anxiety, insecurity and hyper-sensitivity” (Shea & Derry, 2019). Students with ASD often have communication disorders and have challenges interacting with teachers and peers (Shea & Derry, 2019). This discomfort can lead to social anxiety and oftentimes when students have social anxiety, they seek refuge in a safe place: the school library. Establishing a relationship with the students is key in helping them overcome their social insecurities (Shea & Derry, 2019). Anxiety can also be triggered by things many neurotypical individuals would not think twice about. People with ASD have difficulty imitating common neurotypical actions. Keeping eye contact, awareness of a specific voice tone, understanding figurative language or body expressions as well as controlling thoughts that may become obsessive are challenging (Remy & Seaman, 2014). Cognitive processes can be hard to manage for those with ASD. Executive functioning (organizing, planning, ability to focus) can be a true struggle in day to day life (Remy & Seaman, 2014). To those with ASD, all tasks can seem to have the same level of urgency and, therefore, prioritization can be daunting (Remy & Seaman, 2014).

Communication and Understanding

Communication is a huge part of being on the autism spectrum. Receptive and expressive language can be very challenging for those who have ASD. Edwards (2018) states,

“Communicating with an autistic patron may present more of a challenge and it may take longer to ascertain the person's specific information needs, the librarian’s mission remains the same: providing the best service possible and giving the patron a reason to return to the library” (p. 1).

Communication deficits greatly hinder when it comes to socializing and working in collaborative groups can be very hard with someone who has ASD (National Institute of Mental Health, 2018). Oftentimes they miss social cues and may feel uncomfortable voicing their own opinion. Things like making eye contact, reading body language and facial expressions and “difficulty understanding personal space” (Shea & Derry, 2019, p. 326), can be very hard for those with ASD. Individuals with autism may have trouble expressing their needs to a librarian, so using alternative ways (such as using a chat feature) to communicate may be helpful in a situation where students are not expressing their needs. All media centers should have strong visual clues to help support students of various exceptionalities.

Assistive technology is also something that some ASD students may have with them to communicate (Shea & Derry, 2019). Being up to date on devices and programs is important for a school librarian in order to communicate with all students; something that not all school librarians feel comfortable with (Shea & Derry, 2019). School librarians should be knowledgeable with assistive technology devices and be seen as school leaders that can help students, teachers and families use these devices (Ennis-Cole & Smith, 2011). There are various ways that an LMS can help collaborate with teachers. They can help “integrate equipment into the school curriculum; monitoring student progress on and satisfaction with the apparatus; and helping teachers modify the curriculum to better support individualized student learning” (Ennis-

Cole & Smith, 2011). Students may also communicate by using sign language. It is important for library staff to have skills to assist non-verbal students. The biggest thing to help students with autism to communicate, is for them to feel comfortable to do so. Learning some of these techniques are good topics for professional development.

Professional Development for School Librarians

With school libraries serving such neuro-diverse student populations, it is important that educators understand the need to partake in professional development opportunities. All library staff members need to have awareness of ASD and know what to potentially expect from patrons. If a library staff member is not trained, they can misinterpret behavior as out of control (such as meltdowns) and think that disciplinary action needs to be taken (Edwards, 2018). Not only would this action be inappropriate to do to assist a patron with ASD, it would also be extremely damaging to the individual. The library would be interpreted as a dangerous and unsafe place to go (Edwards, 2018).

Understanding what might happen if a student has a meltdown and identifying why that is different than a tantrum, is important in learning how you can help a student regain control. Understanding those misconceptions with autism is vital for students with ASD. Anderson and Everhart (2015) stress on the importance for school librarians to have opportunities to have proper training on how to assist patrons with autism. They recommend participating in Project PALS' (Panhandle Autism Library Services) online training, which consists of four modules for librarians: About Autism, Arranging the Library Environment, Social Networking and Interacting with Technology and Communicating with Individuals with Autism (Anderson & Everhart, 2015, p. 24). These lessons are all grounded in research and created by experts on how

librarians can assist patrons with ASD. Remy and Seaman (2014) suggest:

Many libraries set aside time each year for staff training activities, and ASDs would be an appropriate subject on which to focus. Staff development opportunities could include hands-on workshops, discussions with experts (ASDs, faculty, psychologists), and team building activities that involve role-playing. (p. 27)

There are other latest approaches to help serve school librarians with professional development opportunities (Project ENABLE, 2018; The Autism Welcome Here Grant, 2018; The Illinois Public Library, 2018) as well as other reputable online resources available on Autism information sites (Edwards, 2018). Even with the wealth of information available online about autism spectrum disorder, there still exists large gaps in the research that need to be addressed. Awareness on ASD is vital to help others understand, have empathy, and assist those on the spectrum.

Gaps in Research

The research on serving K-12 students with autism in the library is scarce. There are not many resources available to train library staff on how to help make a student with ASD more comfortable and at ease while they are in space (Edwards, 2018). Additionally, librarians need to be self-educating when it comes to keeping up with the different types of communication/assistive technology that is currently being used for people with autism (Lawrence, 2013). It would be beneficial to hear from students on the autism spectrum themselves so that school librarians can learn how to better support their patrons. Shea and Derry (2019) assert:

“Surveying students with ASD directly about their needs pertaining to libraries and

library services would be a much-needed impetus to drive further research. The library community would benefit from both quantitative and qualitative studies focusing on the viewpoints of students with ASD,” (p. 330).

Conclusion

This chapter focused on the current research available on serving students with ASD in a K-12 school library. Themes addressed included: Identifying ASD, library programming, library design, transitions and anxiety, communication and understanding and professional development opportunities or suggestions. The research is slim. All available research indicates thoughtful accommodations that should be made to enhance a positive experience in the library for patrons with ASD. Research indicates a strong need for specific professional development opportunities on how to better serve students with ASD. Research also indicated a clear correlation between comfort level in the library and communication. An approachable LMS who is trained on how to effectively communicate with students who had ASD is important for a successful encounter. The next chapter will go over the methodology of the curation of resources for this research.

Chapter III: Methodology

Introduction

The intent of this study was to identify strategies that an LMS can use to make the school library environment inclusive for students with ASD while reducing anxiety during the transition into the library environment. Along with the environmental changes, answering the important question on how a school library can support an individual with ASD through library programming is of utmost importance. The research analyzed so far has shown various ways that an LMS can improve the physical environment in a school library to help with accessibility, nerves, and transition in library space. The hope that the research highlighted and summarized in this paper can be used to help other LMSs, teachers, and school staff for guidance on how to create a more inclusive space for neuro-diverse students with ASD.

This chapter will focus on the methodology of selection and evaluation of resources. It will explain the categories chosen for analyzing the research articles and how information was extrapolated for chapter two.

Institutional Review Board Exemption

Due to the nature of this research, the Institutional Review Board (IRB) was not required for approval. Traditionally, this is a group that would need to approve research done on human subjects in order to protect their rights and well-being. All research articles that were chosen were grounded in existing research studies and analysis, therefore there are not any active humans currently under study for this specific paper.

Methodology

The research was curated by using terms and phrases such as “Autism Spectrum Disorders and library”, “autism and school libraries”, “ASD and libraries”, “ASD and media center” and “qualitative autism and library”. The articles will be located using *Google Scholar*, *EBSCOhost* and *Emerald Insight*. The articles were chosen after reading and identifying key trends in how to better support neuro-diverse learners in the school library.

The articles were limited with the parameters of being published within the last ten years. This was intentionally set so that all the information represented was more current for the sake of this research study. The articles included qualitative information as well as focus on the neurological and development disorder, ASD. The publication timeframe was to gather information within the last five years (2014-2019) to make sure that the research articles were more recent. When limited results were found, the timeframe was set back to the last ten years (2009-2019). The articles that were selected for the analysis of the study needed to have a component in them regarding students with ASD and how the library can support them (whether it be the physical environment, communication, and/or media programming). The information was gathered using a table on a Google document, identifying information such the definition of autism, library programming, the layout and design of the media center with special consideration to patrons with ASD, how to ease student anxieties when coming to the media center, how to better communicate with patrons who have ASD, and professional development that may be available for LMS.

Understanding the characteristics of autism is important for any LMS to have a working knowledge of since it is a spectrum disorder (Clerkley, 2016), as well as how to differentiate

their library programming to accommodate neurodivergent learners was an important factor for the selection of articles. Students with ASD may struggle with transitions. Entering a school library can be upsetting. Articles that touch on anxieties and communication were viewed for selection for this research. Finally, the recognition of the need for professional development opportunities and/or the resources to participate in professional development opportunities for LMS were also sought in the articles with how LMS can better support students with ASD. The articles were all chosen after the research timeframe had been expanded to optimize the results. Some of the research articles led me to other research findings which helped me expand my search.

Timeline

The completion date for this paper was for the fall semester of 2020. In December of 2019, the topic was chosen for study. Chapters one and two were done in January of 2020. Edits of chapters one and two were done with chapter three following in February 2020. Edits continued in March and April of 2020. The first committee meeting was held in April of 2020. Committee members include three graduate faculty members: Dr. Jennifer Hill, who is the committee chair, Mr. Davidson Blanchard, assistant professor in the Teacher Development department and Dr. Brian Valentini, assistant professor in the Special Education department. The paper was sent out to committee members in April of 2020, and the final committee meeting will take place in November 2020.

Conclusion

The research articles chosen were located via *EBSCOhost*, *Emerald Insight* and *Google Scholar*. Additional sources were found through reference materials outlined in selected

resources for evaluation on this topic. The search terms that were used were “Autism Spectrum Disorders and library”, “autism and school libraries”, and “ASD and libraries” and “qualitative autism and libraries”. Research was organized through a table made using a Google document. The following chapter will summarize the findings of the research.

Chapter IV: Findings

Introduction

Creating an equitable learning experience for all students is imperative in education as students need equal opportunity to achieve their full potential. The school library is a place where students can come to access resources and information while feeling welcomed and safe. There is data that is in support of the notion that students social emotional learning needs can be met in a space that is thoughtfully designed and programmed to offer support to all learners. The secondary research conducted attempts to correlate the importance of proper training for LMSs in supportive strategies, programming and school library design to reduce student anxieties in the space and how that creates an inclusive atmosphere to the whole community of learners.

This chapter will summarize the research findings. It will be organized by the research question main ideas:

1. What strategies can library media specialists use to make the school library environment inclusive for students with autism spectrum disorder?
2. How can librarians help reduce student anxiety when entering the library?

Summary of the Findings

The findings of the research have been put into Table 4.1 to clearly show the research trends and other factors. This table includes author(s), year of publication, title, summary and other relevant factors.

Table 4.1 Summary of Analysis

Author	Year	Title	<u>Summary of Analysis</u>	
			Summary of Findings	Other Facts
Anderson & Everhart	2015	Project PALS	The school library is Considered to be a Safe and welcoming environment for patrons with ASD, but school librarians do not have adequate training to serve this growing population of students.	Offered multiple professional development models to for LMS to better serve patrons with ASD.
Anderson	2018	Autism and the academic library: A study of online communication	A study was conducted to better understand the experience of students with ASD and academic libraries. This study was conducted using the social model of disability studies. Research shows the importance of space considerations (lighting, noise, signage) to help support patrons with ASD while lessening student anxieties.	Used qualitative analysis to get firsthand accounts of students with ASDs experiences regarding space and communication.

Table 4.1 Continued

Edwards	2018	Serving autistic library users: Fostering inclusion while meeting individual needs	The research acknowledges the lack of training and experience librarians have with patrons who have ASD. The author stresses the importance of welcoming environment and communication needs.	Offered several different resources for librarians to pursue to better themselves professionally regarding patrons with ASD.
Ghuloum & Alycoub	2016	Activated the role of the public library towards Autism Spectrum Disorder (ASD) in Kuwait	The authors speak about the library role in supporting the whole community while pointing out the lack of awareness surround ASD.	Research was conducted in Kuwait by doing interviews and questionnaires to individuals with ASD and their families along with librarians.
Lawrence	2013	Louds hands in the library: Neurodiversity in LIS theory and practice	The research conducted highlights the knowledge gap in library services regarding neurodiversity. The author focuses on different approaches that can be taken to improve services to patrons who are neurodiverse.	Focuses on neurodiversity and the importance of referring to ASD that way rather than a disability.

Table 4.1 Continued

Remy & Seamon	2015	Evolving from disability to diversity: How to better serve high functioning autistic students	In order to better serve those who have ASD, library design is of utmost importance as well as customer service ensure a positive experience in the library. Doing so, can help those with neurodiversity transition with ease and limit feelings of frustration or anxiety.	Offers ways for librarians to assist patrons with ASD.
Shea & Derry	2019	Academic libraries and autism spectrum disorder: What do we know?	This article talks about the lacking of research in how librarians can support patrons with ASD. The authors offer several ways one can support in library. The research focuses on the importance of having an inclusive physical space, communication that is effective, understanding and how to help anxieties.	The research done focuses on school, public and academic libraries.

Inclusive Media Centers

School librarians serve an important role in a school. LMSs can create programs that are supportive, resourceful and progressive with technology and information literacy. A school librarian is trained to curate resources, which includes ensuring there are equitable materials available for all student needs (Curry Lance & Kachel, 2018). Collaborating with a special education teacher for supporting students with ASD could be a natural partnership and first step to creating a media center that is inclusive as well as thoughtfully designed. Research has proven time and again how a school librarian can better the outcome of student learning (Curry Lance & Kachel, 2018). This fact is for the whole school community of learners.

The research analyzed in this paper shows the importance of a thoughtful physical space in the media center design. The organizational layout of library books is important for all patrons. This helps ease the frustration of locating materials. Anderson (2018) stated the importance of having clear and obvious signage showing where things are located in the media center—including where the quieter spaces are. Anderson (2018) interviewed individuals with ASD who reported to have a positive study experience in a study room or privacy carrel in the school library. These spaces in the media center are quiet and distraction free (Anderson, 2018) They can be place of solitude for students who are experiencing sensory overloads or just need a quieter space to focus. They should be included in any school library design to fulfill the needs of all learners. Librarians as a whole, are trained in the importance of equity. Equity needs to be in mind during any media center design.

Auditory concerns in the library are frequent. School libraries have become more collaborative and innovative. This has naturally led to more noise in the school library, which

needs to address in a way that is not deterring the synergistic flow of collaboration.

Considerations need to be made in order to accommodate the wide range of learners needs (Anderson, 2018). Modern designs can now incorporate acoustic paneling as a means to reduce distracting noises. Lighting is also a design that needs to be considered to ensure the environment is sensory friendly (Shea & Derry, 2019). Edwards (2018) suggested noise cancelling head phones as an easy and affordable way to provide those with ASD the opportunity to have the noise muffled.

The main barrier to these positive environmental changes in a school library come down to fiscal issues. “A shortage of qualified staff regarding autism spectrum lack of budget lack of sufficient awareness of some library management towards ASD services in their libraries and they think it is not a priority lack of clarity about library management strategic objectives and vision regarding ASD” (Ghuloum & Alyacoub, 2017). This is important to note, as even with the knowledge of how a space should be designed for people with ASD, budgetary restraints are a factor in making these positive adjustments. Adequate funding is a huge need in order to have a successful design in addition to proper management of trained professionals in allocation of the funds.

Communication is another area that the research suggested needed improvement for librarians to assist patrons with ASD. It is important to note that language skills can vary greatly with those who have ASD. Some individuals may have a strong vocabulary with extensive language skills, others could be nonverbal. This means that communication and expression may also vary significantly (Edwards. 2018). Assistive technology devices can help greatly for those

who have communication deficits. Librarians should be trained on how to use and train others on assistive devices work.

LMS are in the position where they see the whole school. When student come into the media center space, LMS could offer opportunities for students to socially interact with one another (Anderson, 2018). These social interactions with a trained LMS could be very beneficial to one with ASD. Anxiety in social situations or in situations unknown is common for those on the spectrum. The risk of students with ASD to develop anxiety or depression disorders is double than those without ASD. (Shea & Derry, 2019). LMS should be trained on the ways they can help ease anxieties and help make transitions easier in the media center. This can help students break free from their anxieties and focus more on tasks (Remy & Seaman, 2014).

Programming

Inclusive programming is crucial to ensure that all students receive an equitable education. The LMS aims to identify school community needs: technology, programs, resources while collaborating with other teachers, agencies or the community (Ghuloum & Alyacoub, 2017). There are many ways that school librarians could help implement strategies and tactics for students with ASD. Differentiated lessons is really important, making sure to provide visuals and slow down directions to help with information processing. Allowing students to use fidgets is also helpful to allow them to better focus while meeting tactile needs. Offering special events or integrating things like sensory story time into the curriculum is also something that promoted inclusivism for all students.

Ghuloum and Alyacoub (2017) conducted research to find out more information on how libraries serve individuals with ASD by meeting their needs as well as their families. They did a

combination of questionnaires and interviews (27 Kuwait librarians and multiple ASD patrons and their families). There were 370 respondents (Ghuloum & Alyacoub, 2017). The following was reported as the main barriers of programming were that individuals with ASD felt that librarians did not know what ASD was or the meaning, resources specific to ASD was rare to find and/or lack of support with electronic resources (Ghuloum & Alyacoub, 2017). A strong school library program starts with a qualified and trained LMS.

Professional Development

The secondary research also shows the lack of professional development opportunities for LMS regarding how to better serve students with ASD.

Conclusion

Libraries are considered one of the most important places to gather resources for the entire school community. Being able to meet the needs of neurodiverse learners, such as those who have ASD, is imperative. Students with ASD should feel at ease when entering a library, not discomfort. There is a clear correlation between the universal design of the school library with additional signage creating more inclusion while simultaneously reducing student's anxiety in the space. Having a LMS who is trained on how to best assist students with ASD ensures that the school library is truly a supportive learning environment for all students.

Chapter V: Conclusion

Discussions and Conclusions

The secondary research of this paper focused on the following research questions:

1. What strategies can library media specialists use to make the school library environment inclusive for students with autism spectrum disorder?
2. How can librarians help reduce student anxiety when entering the library?

The findings of the research (Anderson & Everhart, 2015; Anderson, 2018; Edwards, 2018; Ennis-Cole & Smith, 2011; Ghuloum & Alycoub, 2016; Lawrence, 2018; Remy & Seaman, 2015; Shea & Derry 2019) shows the different ways LMSs can make the school library environment more inclusive to students who have ASD. The LMS can make modifications to the learning environment, improving things such as signage, lighting, noise and offering quiet work spaces. The programming can be improved by implementing strategies to the curriculum; literature focusing on characters with ASD, stronger visual, directions that are more simplex and teaching with understanding. School librarians are often seen as school leaders; collaborating with special education teachers would be a great way to take the lead on using assistive technology devices and training other staff on how to use them. Doing this opens more doors for communication and interaction with those who use these devices; something that would be so beneficial to students with ASD.

Anxiety can be eased upon entering the library with strong visuals that clearly state where resources are located as well as identifying specific areas in the library (Anderson, 2018). LMSs also need to be able to communicate effectively with patrons who have ASD (Edwards, 2018).

Being approachable, understanding and patient are all attributes that LMS should have to best serve the school community.

Discussion of the Findings

It is with hope the findings of this paper will help support a LMS with ideas, research and bring awareness to the growing need to learn new ways to support patrons with ASD. LMSs serve the whole community and having a depth of knowledge on how best to communicate and serve patrons with ASD is an important part of the profession. Currently, professional development opportunities for more autism awareness and strategies that the LMS can implement is extremely scarce.

Limitations of the Study

The research articles about ASD and the school library were very limited. There are articles available on higher education and academic libraries as students with ASD enrollment has increased in the last decade. The timeframe for this research had to be pushed back to find more resources that support the questions set forth in this secondary research study.

Eight articles were chosen for this analysis. The researcher hoped to find at least ten but proved to be a struggle to locate ones that were peer reviewed and had length. The original focus was to look for articles that were specific to the United States of America, but the researcher eventually chose to branch out at other countries for articles of high quality. There were also limitations regarding data that was collected. Ideally, more information should be collected in order to get a more accurate picture of the effect a supportive library program has on students with ASD.

Implications of the Study

It is important to note that autism is a spectrum disorder and there are no two people who are the same, as symptoms of autism vary between people (Remy and Seaman, 2014). LMSs can use strategies to help support and improve the experience students have autism in the media center, but the best way to support them would be to try to establish a relationship to get to know the student as an individual (Grassi, 2018). Interviews, surveys and questionnaires are helpful in gathering information, but other means (such as library program assessments and/or observations) to get data should be used to get a more holistic picture of the media center experience.

Suggestions for Further Research

Further research needs to be done to show how impactful an LMS can be when they implement the changes set forth in this paper. It would be useful to gather more data to qualitatively measure the positive effect that a LMS can have, who is trained, to support those with ASD. The findings of that could be done by assessing students with ASD and how they are doing in a library program. To further explore the impact of a library program, gathering information on experiences of how the home environment has been affected by the library programming would be impactful information to have that shows the correlation outside of the media center. More tools should be used to gather information; questionnaires, interviews, surveys and observations. Literature reviews on the various effects an inclusive media center can have on a student with ASD are needed.

Curation of the book collection is something that all LMSs do. Making sure that we have diverse books is important to allow students to feel represented and included. Having resources

that can help support students during all phases of their education is important to ensure emotional learning growth. Including a collection of social stories as part of the curation of materials in a school library would offer support to staff and students alike. Programming in the academic library supports aspects of many of these key areas. LMS who team up with other teachers to create lessons that are meaningful and engaging are shown to increase student learning outcomes. This collaboration includes library resources with a focus on information literacy as well as developing research skills within a library program that can support students in their academic achievement while also building students own self efficacy (Eshbach, 2020).

Research supporting best practices on how LMS can server students would be beneficial to all LMSs. Having opportunities to change the discussion on autism can also support LMS in their own professional development growth (Lawrence, 2013).

Conclusion

Discussion of the findings during this chapter emphasized the importance of having more professional development opportunities to improve upon the role of the LMS and how they interact, assist and teach students with ASD. These professional development opportunities should include how to provide support through the physical design and library programming.

Limitations of the study shows the scarcity of research available regarding how LMSs can support patrons with ASD. The research chosen was a total of eight articles that highlighted the importance, effect and possible avenues for professional development opportunities for librarians.

Implications of the study confirmed the importance of proper training for school librarians to have as they serve all patrons in a school who have varying abilities. There is a

strong need for LMSs to have skills and strategies to serve all students who enter the school media center. These skills are to do with the space design, curation of materials, lessons and collaboration with other teachers.

Suggestions for further research in this chapter highlight the importance of gathering data that shows how impactful a strong school library program can be with a trained LMS who can support students with ASD. Having more data available to show the positive impact both in and outside of school would be notable to school administrators, special education teachers, students and families/caregivers.

This summary and synthesis of the research supports the claim that creating a school library that is inclusive means that LMS have to have a repertoire of strategies and skills to create an environment that is inclusive to students who have ASD. The intent of this secondary research is to help improve library services to students who have ASD. The media center culture should be one of inclusivity, where everyone feels welcome.

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