

Research Article

Confident but Lacking Support: School Librarians and Students with Autism

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Abstract

School librarians work with students across their organizations, including those with disabilities such as autism spectrum disorder (ASD). However, little is known about how prepared school librarians are to serve these students. Using a mixed-methods survey, this study sought to explore training school librarians have completed regarding ASD and students with disabilities, as well as the effects of training on librarian confidence and library services. Based on results, librarians who received training through their school district or professional development outside of coursework reported being more confident in supporting students with ASD in the school library.

Keywords: autism; neurodiversity; school librarians; professional development; disability

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Introduction

School librarians have a unique role in the school environment, crossing classroom boundaries and often working in collaboration with most teachers and classes in the school. This includes work with general education, inclusive, and special education classes. In any classroom scenario, it is likely that school librarians are already working with students with autism spectrum disorder (ASD).

With prevalence most recently reported at 1 in 54 children diagnosed with ASD in the United States (Maenner et al., 2020), it is understood that these children are a part of our schools. Like all teachers and support personnel serving students with disabilities in the school, school librarians are expected to tailor their lessons, programs, and services to meet student needs as identified on their individualized education plans (IEPs). Yet, it is unknown if school librarians are being provided with adequate training to best meet students with ASD's needs. School librarians are trained educators who have the unique potential to work with all students at their schools. They are expected to provide services and supports to the students they serve and the teachers they work with, and they also have specific skills and access to information, resources, and physical spaces that may be beneficial to students with ASD (Bress, 2013). However, it is likely that school librarians are not being provided all of the professional tools they need to succeed when it comes to working with students with ASD (Anderson & Everhart, 2015).

Literature Review

A search of the *Library Literature and Information Science Full Text* database using keywords "autis*," "disability," and "neurodiver*" returned papers which provide background information for this study. Additional information was gathered through searching popular practitioner resources such as the American Library Association website, along with Boolean Google searches adding the keyword "librar*."

Education and Training

In general, school librarians hold graduate degrees from an accredited program and are expected to maintain their knowledge in the field through professional development, though particular standards and requirements vary by institution and location. While core coursework, or that which is foundational knowledge expected of all graduates, differs by institution, one study found that practitioners and library and information science (LIS) faculty generally agreed that the following four areas are skills that should be included: a) knowledge of professional ethics; b) evaluating and selecting information sources; c) cultural competence; and d) reflective practice grounded in diversity and inclusion (Saunders, 2019). However, previous work has indicated many current topics relevant to the field and beneficial for practicing librarians are not adequately addressed through coursework (Burger et al., 2015; Saunders, 2011).

Practicing school librarians have opportunities to continue their education through professional development such as conferences, online trainings, and by learning from professional journals. Additionally, depending on their district or state, school librarians may be expected to complete continuing education credits for licensing purposes (American Association of School Librarians, 2020). For those who seek it out,

professional development opportunities exist for learning about how to work with and support students with ASD. Multiple books published through the American Library Association (ALA) alone offer guidance for librarians working with students with ASD (Anderson, 2021; Farmer, 2013). Online trainings for librarians about working with individuals with special needs have been developed through federal grant funding from the Institute of Museum and Library Services (IMLS), highlighting both the value and the need for these opportunities (Project PALS, n.d.; Targeting Autism in Libraries, n.d.). However, barriers to access such opportunities do exist, often related to funding and time.

Well-trained librarian and library staff, equipped with current knowledge and best practices in the field, are important for meeting the needs of all users, particularly when working to provide equitable access to services. A study of academic librarians found that a well-trained staff was one of three critical components for meeting the needs of students with disabilities (Carter, 2004). School librarians do report working with patrons with disabilities and, more specifically ASD. A survey of public librarians found that ASD was the disability category librarians were most often asked to accommodate (Adkins & Bushman, 2015). However, a librarian must be self-motivated to attend specific sessions at a conference, or access specific trainings or articles about the subject.

School Librarians Working with Students on the Spectrum

The National Professional Development Center on Autism Spectrum Disorder (NPDC) published a comprehensive review of research which identified 27 evidence-based practices (EBPs) (Wong et al., 2014). These EBPs are appropriate for all professionals to use with students with ASD. Please see Appendix for a comprehensive list of EBPs along with the acronym for each. Though there are no empirical studies specifically about school librarians and EBPs, teachers have reported they do not feel adequately trained to implement these practices (Hendricks, 2011).

Despite the apparent lack of preparation, school librarians do work with students with ASD, including those served in inclusive classrooms and in more targeted programs or self-contained classrooms. Librarians are expected to collaborate with teachers to provide an educational experience that complements classroom learning. For example, Baucum (2019a) describes a robust series of programs for children with ASD that make connections with their coursework and work to meet the goals of their IEPs. Libraries also provide access to quiet spaces that can be a break from other overwhelming sensory experiences (Anderson, 2018). In the library, students “not only have ownership and autonomy, but also feel part of a community;” (Cellucci, 2017, para. 4) taking a break in the library still allows them to be present and a part of the school community.

Methods

This study expands upon previous work to identify the training school librarians have received to prepare them for working with students with ASD, and where additional attention is needed (Layden & Anderson, 2021). Using a mixed-methods approach, an online survey was implemented through Qualtrics with both closed and open-ended questions to address the following research questions:

RQ1: What disability categories do school librarians report supporting in their role as a school librarian?

RQ2: What training do school librarians report receiving specifically in the area of ASD?

RQ3: What training do school librarians report receiving about specific evidence-based practices (EBPs)?

RQ4: What is the relationship between access to training and services for students with ASD?

This study analyzed nine survey questions focused on training for school librarians. Survey questions used were developed based on the available literature and the study's research questions. Additionally, eight demographic questions were included to understand background information such as participants' years of service, level of education, and general geographic location.

Participant Recruitment

This study was open to individuals who identified as currently working as a school librarian in the United States. Participants were also required to be at least 18 years old. Participants were able to enter into a drawing for a gift card; this data was detached from all other survey responses in a separate, linked Qualtrics survey to ensure anonymity. All responses were otherwise anonymous. A message of informed consent, approved by the Institutional Review Board (IRB) at the researchers' institution, informed participants that their responses were anonymous, their participation was voluntary, and they could discontinue the survey at any point.

Multiple measures were taken to distribute the online survey widely, both in the school librarian community and the librarian community more broadly. In the school librarian community specifically, a call for participation and link to the survey was posted to the Facebook group "The School Librarians' Workshop" (11.9k members at the time of survey distribution), and the LISTSERV "School Library Media & Network Communications" (12k subscribers at the time of survey distribution). Emails were also sent to the presidents or directors of all American Association of School Librarian (AASL) state chapters, asking for distribution to their memberships. Calls for participation and the survey link were shared with librarian groups that include school librarians, but are not exclusively for school librarians. These were posted to the Reddit forum "Librarians" (43k members at the time of survey distribution), the Facebook group "ALA Think Tank" (42k members at the time of survey distribution), the American Library Association (ALA) "Middle Grade" LISTSERV (unknown member count), and the Facebook group "Storytime Underground" (15k members at the time of survey distribution). Finally, a call for participation was tweeted through the first author's personal Twitter account, which is used in a professional capacity and is followed by a number of librarians.

Data Analysis

Descriptive statistics were run to analyze and provide simple summaries of the data. Additionally, responses to one open-ended question were coded by emerging themes by both researchers, who compared results until in agreement. Finally, chi-square tests of independence, in which two variables are compared to determine relationships or associations, were conducted. These tests were conducted through IBM SPSS Statistics software, an interactive statistical software platform.

Limitations

This study did not utilize a random sample, so the results cannot be generalized to the population of school librarians as a whole. Instead, they are reflective of school librarians who were already interested enough to respond to a call for participation about autism. Additionally, though the survey was distributed to a broad online network, it only received 137 completed responses. The survey was distributed during April and May of 2020, a tumultuous period for school librarians as they adjusted to working online during the Covid-19 pandemic. Distributing the survey during a more stable time might have generated more responses.

Respondents to the call for participation in this study likely already had a vested interest in providing students with autism support at their libraries. Nearly 6% of participants in this study had a master's degree in special education or equivalent. Though 6% is not a large representation, it certainly is something that should be considered when examining this study's results. While some positions in academic librarianship do require a second graduate degree, there is no readily available data that demonstrates that this is typical for school librarians. This overlap between librarians who also had a master's degree in special education is therefore an interesting finding in itself, and one which should warrant further exploration.

Results

The majority of participants in this study reported their highest level of education as a master's degree in library science or equivalent (MLIS; 61.3%), while another 16% obtained a degree beyond a master's degree. 5.8% had a master's degree in special education, and another 5.8% had a bachelor's degree as their highest level of education. However, most respondents reported little, if any higher education credit-bearing courses in the area of autism (89%).

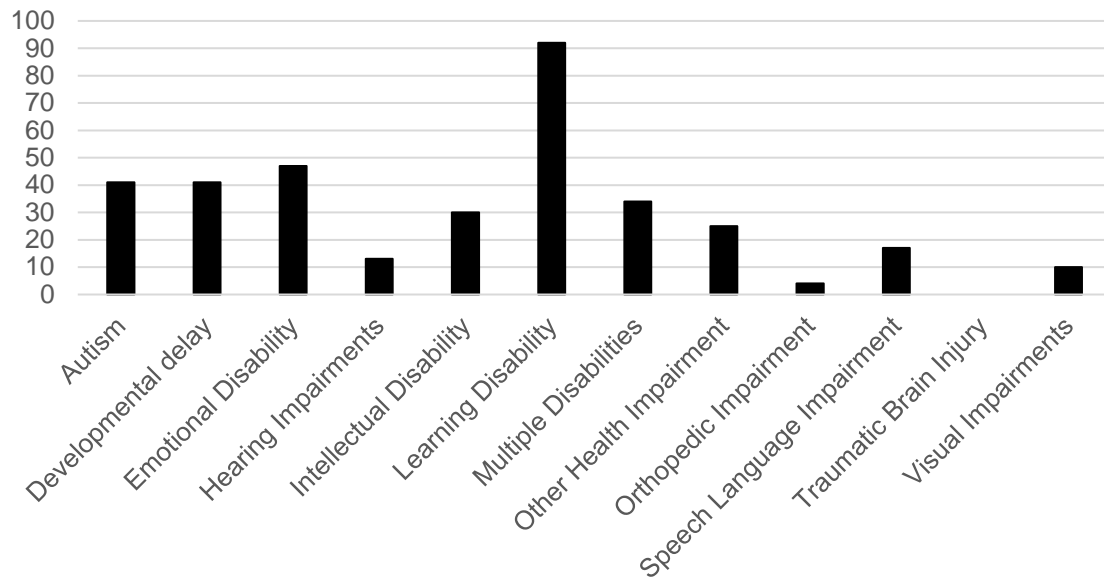
School librarians in this study largely had multiple years of experience. Nearly half (48.7%) reported working as a school librarian for more than eleven years, while 41.2% worked in that capacity between two and eleven years. Only 10% reported two years or less of experience working as a school librarian.

Participants were asked how many students with ASD they have worked with, to the best of their knowledge. Though a small percentage reported "none," (3.3%), many more did report working with this population of students. Just over half (50.5%) have worked with 11-50 students with ASD, while 26% have worked with 1-10 students. 20% have worked with more than 50 students with ASD.

Special Education Training

Participants were asked to list the top three disability categories they were asked to support in their school library. 118 participants responded, selecting up to three categories each. Of the categories given, "learning disability" was most frequently selected (n=92) followed by "emotional disability (n=47), and both "autism" and "development delay" (n=41). Of all categories presented, only one was not selected by any librarians: "traumatic brain injury." Full results can be seen in Figure 1.

Figure 1
Disability Categories Supported



Note. N=118; participants selected three categories.

Autism Training

Librarians were asked about the training they received during their coursework, as well as through professional development. 137 school librarians responded to the question “how much training did you receive on ASD in your graduate library preparation program?” Of these, more than three quarters of participants (76.6%) said they had “no courses” that addressed ASD. 13.9% had one required course that addressed ASD for at least part of the course, and 7.3% took an elective course that addressed ASD. Only 2.2% of participants had multiple required courses that addressed ASD.

Beyond coursework, participants were asked if they received any additional training specific to ASD and if so, how much. Training was defined by the researchers as including workshops, conference sessions, or online webcasts or webinars. Of 137 responses, the most common answer was “I have received no additional training specific to ASD” (40%). The next most common answer was 1-2 hours of training specific to ASD (24%). Interestingly, the third most common answer was the most amount of training possible, 10 or more hours (18%). 11.7% received between 3-5 hours of training, and 5.8% received between 6-9 hours of training.

Participants were asked “does your school district provide professional development specific to school librarians supporting students with ASD, even if it was included in a broader professional development session about students with disabilities?” Of 137 responses, 68.6% responded with “no.” 18.2% responded that “yes, we’ve had one workshop or in-service about supporting students with ASD,” and 13% responded that they have had “multiple workshops or in-services about supporting students with ASD.”

School librarians were also asked about how they *felt* about their level of training. 137 participants responded to the question “do you feel you have received adequate training in the area of ASD to support students with ASD in the school library?” More

than half (56%) answered “no,” and only 11.7% answered “yes.” Another 32% said they were “unsure.”

Participants were presented with the list of 27 EBPs from the NPDC (Wong et al., 2014) for working with individuals with ASD, and were asked to rate their level of training for each practice. In all cases, the majority of participants reported “I have received no training on this EBP.” Very few participants reported receiving six hours or more of training on any of the 27 EBPs. The most participants reporting this level of training were for the EBPs of Modeling and Reinforcement, both with four respondents each. These results are displayed in Table 1. Please see Appendix for EBPs and associated acronyms.

Table 1
Level of Training on Evidence-Based Practices

EBP	No Training	1 hour or less	More than 1 hour but less than 3 hours	More than 3 hours but less than 6 hours	More than 6 hours
ABI	83.7%	9.8%	1.6%	3.3%	1.6%
CBI	69.9%	15.5%	5.7%	7.3%	1.6%
DRA/I/O	81.2%	11.5%	2.4%	3.3%	1.6%
DTT	92.7%	5.7%	0%	1.6%	0%
ECE	91.1%	4%	2.4%	1.6%	0%
EXT	90.9%	6.6%	1.7%	0.8%	0%
FCT	77.4%	11.3%	5.7%	3.2%	2.4%
MD	65.3%	21%	6.5%	4%	1.6%
NI	91.9%	4.9%	0.8%	1.6%	0.8%
PII	90.3%	4.8%	2.4%	0.8%	1.6%
PMII	83.1%	12.1%	3.2%	1.6%	0%
PECS	77.4%	13.7%	4%	3.3%	1.6%
PRT	94.4%	4.8%	0%	0.8%	0%
PP	74.8%	12.2%	8.1%	4.1%	0.8%
R+	67.7%	19.4%	6.5%	3.2%	3.2%
RIR	75%	11.3%	9.7%	1.6%	2.4%
SC	81.5%	10.5%	4.8%	2.4%	0.8%
SM	85.4%	8.1%	4.1%	1.6%	0.8%
SN	77.4%	12.9%	5.7%	2.4%	1.6%
SST	71.8%	19.4%	4.8%	2.4%	1.6%
SPG	90.3%	4.6%	0.8%	2.4%	1.6%
TA	89.5%	5.7%	1.6%	2.4%	0.8%
TAI	85.5%	6.5%	4%	3.2%	0.8%
TD	87.1%	8.9%	0.8%	1.6%	0%
VM	91.1%	5.7%	0.8%	2.2%	0%
VS	78.7%	12.3%	4.9%	1.6%	2.4%

Barriers

Librarians were also asked about barriers in providing appropriate services and supports to students with ASD in the library. Of 119 responses, 72% answered “yes,” that they felt barriers exist. These participants were asked to elaborate through an open-ended response, and 83 of those 86 participants provided this information. Thirty-two of those

responses specifically referred to lack of training and education about autism as a barrier. Of those responses, several themes emerged: lack of knowledge of where to start and lack of knowledge about ASD, lack of training opportunities in general, and need for information to support specific circumstances or students.

Lack of Knowledge

Twelve responses described a lack of knowledge, either of where to start with supporting students with ASD or knowledge of ASD in general. For those who reported not knowing where to even start with supporting students with ASD, example responses included “I’m just not aware of what I can do;” “I don’t have enough information to know what barriers exist,” and “I am not educated enough to know.” Multiple participants also described their own lack of knowledge of ASD as a barrier. Participants described “lack of knowledge,” lack of educational preparation, and “education (mine)” as barriers.

Lack of Training Opportunities

Eight participants stated that they were simply not receiving training about ASD, which presented a barrier in providing support. One respondent summarized their lack of training and knowledge:

I have not had any training on working with severely autistic students so I feel I am not supporting them the best way I could when they visit the library. I try my best but I feel like if I had training, I could be more supportive and intentional when crafting library visits and read-alouds.

Other participants described barriers such as “inadequate training,” “lack of training,” and “simply no training with this very unique population. They can be very difficult to manage and I have no training.” One school librarian stated: “more than anything a true lack of training. I just feel unprepared in how to handle the variations and the abilities of the students.” Another participant aptly stated, “professional librarians are not trained to offer disabilities supports.” Participants also noted a lack of training at their specific schools: “there are no trainings, conversations or awareness in my school of needs for students with ASD in our library or specialist areas.”

Need for Information to Support Specific Circumstances or Students

One librarian commented on the lack of specific information they needed to meet their students with ASD’s needs. As they stated, barriers included:

Lack of information about specific actions or interventions which can be taken in the huge library space to meet the needs of specific children- especially the youngest ones. When there is one adult in a large space with 20-30 children - and one child who is an escape artist it can be difficult to maintain a safe and inclusive environment.

Another participant noted that they did not have enough information about each student to support them adequately: “I don’t feel we are given enough information about the students to really help their specific needs.” Similarly, multiple participants noted that they needed training and also to be included on IEPs, so they could be made aware of specific students’ needs: “Not enough training for the library staff - and not being made aware of the student’s IEP’s;” and “Lack of training, lack of support from EC department, lack of inclusion in IEP meetings.”

Relationships between Training, Support, and Services

Librarians were asked “how confident do you feel supporting students with ASD in the school library setting?” The most reported answer was “somewhat confident” (43.8%), and another 12.4% felt “very confident.” 16% felt “somewhat not confident,” 8.8% felt “not confident at all,” and 19% said they felt “neither confident or not confident.”

These overall results were then compared to how much training respondents reported having in their graduate coursework about ASD (Table 2). Of those who reported taking multiple required courses about ASD, 100% reported feeling “somewhat confident,” though, interestingly, none felt “very confident”. However, no relationship between graduate coursework about ASD and confidence was found through a chi-square test of independence ($p = .882$).

Table 2

Confidence in Supporting Students with ASD and Training in Graduate Coursework

How confident do you feel supporting students with ASD in the school library setting?					
	Very confident	Somewhat confident	Neither confident or not confident	Somewhat not confident	Not confident at all
Total for All Participants	12.4%	43.8%	19.0%	16.1%	8.8%
How much training did you receive on ASD in your graduate library program?					
I had multiple required courses that addressed ASD intertwined within the curriculum	0.0%	100.0%	0.0%	0.0%	0.0%
I had one required course that addressed ASD for at least part of the course	15.8%	42.1%	21.1%	15.8%	5.3%
I took at least one elective course that addressed ASD	20.0%	50.0%	20.0%	10.0%	0.0%
I had no courses in my library preparation program that addressed ASD	11.4%	41.9%	19.0%	17.1%	10.5%

Confidence was also compared with amount of additional training respondents reported receiving (Table 3). Of those who reported receiving the most additional training, beyond coursework, about ASD (more than 10 hours), 24% felt “very confident” and another 74% felt “somewhat confident” (Table 3). A chi-square test of independence revealed a significant relationship between training beyond coursework and confidence in supporting students with ASD in the library ($p = .001$).

Table 3

Confidence in Supporting Students with ASD and Training Outside of Graduate Coursework

How confident do you feel supporting students with ASD in the school library setting?					
	Very confident	Somewhat confident	Neither confident or not confident	Somewhat not confident	Not confident at all
Total for All Participants	12.4%	43.8%	19.0%	16.1%	8.8%
Have you received any additional training, outside of your graduate coursework?					
I have received at least 10 hours of training specific to ASD.	24.0%	72.0%	4.0%	0.0%	0.0%
I have received between 6-9 hours of training specific to ASD.	25.0%	37.5%	37.5%	0.0%	0.0%
I have received between 3-5 hours of training specific to ASD.	25.0%	43.8%	18.8%	6.3%	6.3%
I have received 1-2 hours of training specific to ASD.	6.1%	42.4%	12.1%	30.3%	9.1%
I have received no additional training specific to ASD.	5.5%	32.7%	27.3%	20.0%	14.5%

When confidence was compared with whether school districts provided professional development (Table 4), of those who reported that their school district provided “multiple” professional development opportunities about ASD, 39% felt “very confident,” and another 44% felt “somewhat confident”. Again, a chi-square test of independence showed a significant relationship between professional development provided by school districts and confidence in supporting students with ASD ($p = .005$).

Table 4

Confidence in Supporting Students with ASD and Training Through School District

How confident do you feel supporting students with ASD in the school library setting?					
	Very confident	Somewhat confident	Neither confident or not confident	Somewhat not confident	Not confident at all
Total for All Participants	12.4%	43.8%	19.0%	16.1%	8.8%
Does your school district provide professional development specific to school librarians supporting students with ASD					
Yes, we’ve had multiple workshops or in-services about supporting students with ASD.	38.9%	44.4%	11.1%	5.6%	0.0%

Yes, we've had one workshop or in-service about supporting students with ASD.	12.0%	56.0%	12.0%	20.0%	0.0%
No, we've never had a workshop or in-service about supporting students with ASD.	7.4%	40.4%	22.3%	17.0%	12.8%

Finally, when confidence was compared with feelings of adequate training (Table 5), for those who reported that, yes, they had received adequate training to support students with ASD, 63% felt were “very confident” and another 31% felt “somewhat confident about supporting students with ASD in the school library setting. Once more, a chi-square test of independence indicated a significant relationship between how school librarians in this study feel about their level of training and their confidence in supporting students with ASD ($p = .000$).

Table 5
Confidence in Supporting Students with ASD and Feelings of Adequate Training

How confident do you feel supporting students with ASD in the school library setting?					
	Very confident	Somewhat confident	Neither confident or not confident	Somewhat not confident	Not confident at all
Total for All Participants	12.4%	43.8%	19.0%	16.1%	8.8%
Do you feel you have received adequate training in the area of ASD to support students with ASD in the school library?					
Yes	62.5%	31.3%	6.3%	0.0%	0.0%
No	5.2%	37.7%	16.9%	24.7%	15.6%
Unsure	6.8%	59.1%	27.3%	6.8%	0.0%

Relationships between Training and Student Participation

Participants were asked how they felt about students with ASD participating in the library. 80% of all respondents agreed with “I feel like students with ASD should be able to access the school library like all other students, regardless of how much support they need to do so,” 7.3% felt “like students with ASD should be able to access the school library like all other students assuming they do not engage in behaviors that can interrupt the library,” 9.5% felt “like students with ASD should be able to access some components of the school library but may not be appropriate to be in the library without designated staff support (like another teacher or paraprofessional),” and 2.9% felt “like students with ASD should receive special programming to meet their needs separate from other students.” No participants responded that “students with ASD should not be allowed to access the school library unless they can show they are capable of using it like other students.”

Again, these results were viewed through the lens of training and experience. All respondents who also reported taking multiple required courses in their graduate curriculum about ASD agreed with the statement that “students with ASD should be able to access the school library like all other students, regardless of how much support the need to do so” (Table 6). However, a chi-square test of independence revealed no significant relationship between the categories of graduate curriculum and feelings about student participation ($p = .717$).

Table 6

Feelings about Students with ASD Participating in the Library and Training in Graduate Coursework

Which of the following best describes how you feel about students with ASD participating in the school library?					
	I feel like students with ASD should:				
	be able to access the school library like all the other students regardless of how much support they need to do so.	be able to access the school library like all other students assuming they do not engage in behaviors that can interrupt the library.	be able to access some components of the school library but may not be appropriate to be in the library without designated staff support.	receive special programming to meet their needs separate from other students.	not be allowed to access the school library unless they can show they are capable of using it like other students.
Total for All Participants	80.3	7.3%	9.5%	2.9%	0.0%
How much training did you receive on ASD in your graduate library preparation program?					
I had multiple required courses that addressed ASD intertwined within the curriculum	100.0%	0.0%	0.0%	0.0%	0.0%
I had one required course that addressed ASD for at least part of the course	89.5%	5.3%	5.3%	0.0%	0.0%
I took at least one elective course that addressed ASD	80.0%	20.0%	0.0%	0.0%	0.0%
I had no courses in my library preparation program that addressed ASD	78.1%	6.7%	11.4%	3.8%	0.0%

Eighty-eight percent of those who received at least 10 training hours about ASD, again higher than the 80% average for all participants, agreed that “students with ASD should be able to access the school library like all other students, regardless of how much support the need to do so” (Table 7). Again, though, a chi-square test of independence revealed no significant relationship between the categories of post-degree training and feelings about student participation ($p = .651$).

Table 7

Feelings about Students with ASD Participating in the Library and Training Outside of Graduate Coursework

Which of the following best describes how you feel about students with ASD participating in the school library?					
	I feel like students with ASD should:				
	be able to access the school library like all the other students regardless of how much support they need to do so.	be able to access the school library like all other students assuming they do not engage in behaviors that can interrupt the library.	be able to access some component -ts of the school library but may not be appropriate to be in the library without designated staff support.	receive special program ming to meet their needs separate from other students.	not be allowed to access the school library unless they can show they are capable of using it like other students.
Total for All Participants	80.3	7.3%	9.5%	2.9%	0.0%
Have you received any additional training, outside of your graduate coursework? If so, how much have you pursued?					
I have received at least 10 hours of training specific to ASD.	88.0%	8.0%	4.0%	0.0%	0.0%
I have received between 6-9 hours of training specific to ASD.	100.0%	0.0%	0.0%	0.0%	0.0%
I have received between 3-5 hours of training specific to ASD.	93.8%	6.3%	0.0%	0.0%	0.0%
I have received 1-2 hours of training specific to ASD.	72.7%	9.1%	12.1%	6.1%	0.0%
I have received no additional training specific to ASD.	74.5%	7.3%	14.5%	3.6%	0.0%

Eighty-nine percent of those whose school district has provided multiple workshops or in-services about supporting students with ASD, also agreed with the statement (Table 8). Once more, no significant relationship was found between these categories through a chi-square test of independence ($p = .676$).

Table 8

Feelings about Students with ASD Participating in the Library and Training Through School District

Which of the following best describes how you feel about students with ASD participating in the school library?					
	I feel like students with ASD should:				
	be able to access the school library like all the other students regardless of how much support they need to do so.	be able to access the school library like all other students assuming they do not engage in behaviors that can interrupt the library.	be able to access some components of the school library but may not be appropriate to be in the library without designated staff support.	receive special programming to meet their needs separate from other students.	not be allowed to access the school library unless they can show they are capable of using it like other students.
Total for All Participants	80.3	7.3%	9.5%	2.9%	0.0%
Does your school district provide professional development specific to school librarians supporting students with ASD?					
Yes, we've had multiple workshops or in-services about supporting students with ASD.	88.9%	5.6%	5.6%	0.0%	0.0%
Yes, we've had one workshop or in-service about supporting students with ASD.	88.0%	8.0%	4.0%	0.0%	0.0%
No, we've never had a workshop or in-service about supporting students with ASD.	76.6%	7.4%	11.7%	4.3%	0.0%

Finally, 93.8% of those who felt they received adequate training in the area of ASD also agreed with the statement “students with ASD should be able to access the school library like all other students, regardless of how much support they need to do so” (Table 9). However, a chi-square test of independence revealed no significant relationship once more ($p = .390$).

Table 9

Feelings about Students with ASD Participating in the Library and Feelings of Adequate Training

Which of the following best describes how you feel about students with ASD participating in the school library?					
	I feel like students with ASD should:				
	be able to access the school library like all the other students regardless of how much support they need to do so.	be able to access the school library like all other students assuming they do not engage in behaviors that can interrupt the library.	be able to access some component -ts of the school library but may not be appropriate to be in the library without designated staff support.	receive special programming to meet their needs separate from other students.	not be allowed to access the school library unless they can show they are capable of using it like other students.
Total for All Participants	80.3	7.3%	9.5%	2.9%	0.0%
Do you feel you have received adequate training in the area of ASD to support students with ASD in the school library?					
Yes	93.8%	6.3%	0.0%	0.0%	0.0%
No	74.0%	7.8%	14.3%	3.9%	0.0%
Unsure	86.4%	6.8%	4.5%	2.3%	0.0%

Though those who received the most training, or felt that they received “adequate training,” were more likely to respond that “students with ASD should be able to access the school library like all other students, regardless of how much support the need to do so,” chi-square tests revealed no statistically significant relationships between any of these categories.

Discussion

Based on the results of this study, school librarians do not seem have the training and support they need to adequately support students with ASD. In responding to questions about training during coursework, through professional development, and as provided by school districts, the most common answer for all was that no training was either provided or taken. Not surprisingly, more than half of all school librarians participating in this study felt that they were not prepared to support students with ASD. This is a considerable problem, as school librarians work with all students in their schools, including those with ASD. Responses to an open-ended question about perceived barriers were particularly revealing. While no prompts were given about what those barriers might be, nearly 40% of those who believed barriers existed described them as related to training and education.

If those barriers can be overcome, librarians will likely benefit. Chi-square tests indicated statistically significant relationships between confidence in supporting students with ASD in the school library and the level of professional development beyond graduate coursework, access to professional development provided by the school or district, and feelings that one has received an adequate level of training about ASD. Findings suggest that with training, school librarians become more confident in supporting their students with ASD.

General Disability Support

When asked about a comprehensive list of disabilities, school librarians said they most often supported students with learning disabilities, followed by emotional disabilities. Autism and developmental delay tied for the third most often supported disability. This indicates that yes, school librarians are already supporting students with ASD, though perhaps not as often as some other disabilities. That said, during the 2019-2020 school year, the most recent data available at the time of publication, of the more than 7 million students between ages 3-21 years identified as having a disability and receiving special education services in the United States, over 2.4 million students were identified as having a learning disability accounting for approximately one third of the total students with disabilities (National Center for Education Statistics, 2021). Yet, only 803,029 students were identified as having autism which accounts for just under 10% of the total population of students with disabilities (National Center for Education Statistics, 2021). It is possible that school librarians are better prepared to serve those with a learning or emotional disability, or development delay; however no additional questions of that nature were posed in this study.

ASD Knowledge

As noted in the findings, significant relationships were found between multiple categories of training that involved ASD and participants' confidence in supporting students with ASD in the school library, including amount of professional development or training outside of or beyond graduate coursework, and opportunities for professional development as provided by their own school district. Additionally, there was a statistically significant relationship between participants feeling they had received adequate levels of training and their confidence in supporting students with ASD.

For school librarians with an already full schedule, completing additional professional development might not be appealing, or even achievable, without the right support. School librarians are often a department of one, typically working alone to fulfill all functions and roles required within the library. Taking time away from these duties is not always feasible. However, for those who responded to this study, professional development about ASD has helped to build confidence in ability to support students with ASD.

Conferences are valuable learning opportunities for school librarians, including those that are national, such as annual gatherings from the American Association of School Librarians (AASL) and ALA. State chapters of national library organizations also host annual or biannual conferences, and these are often more affordable and easier to travel to and from for attendees. Some conferences are presented on an even more local scale, with higher education institutions, library collaboratives, and library systems hosting events. But, with all such offerings, there is a cost. School librarians must not only pay the price of registration, but they must also find the time to attend. Though school administrators may be supportive, this is not always the case. Not all schools have the budget to allow for such professional development opportunities. Additionally, even if the budget allows, the schedule must align such that school librarians can take the time away from their teaching commitments.

Online professional development might be an option, especially with many conferences shifting to a virtual environment after the initial Covid-19 pandemic. Though there is typically still a cost associated with online learning, many such opportunities are asynchronous so might alleviate scheduling issues. This study did not ask participants to differentiate in how they received professional development, instead it simply referred to “workshops, conference sessions, or online webcasts or webinars” as a whole. Therefore, it is unclear whether the same takeaways would be gained from content delivered in person or online.

A significant relationship was also found between confidence in ability to support students with ASD and professional development opportunities about ASD provided by school districts. It should be noted that this survey did not explicitly ask if librarians attended the offerings, only if their school district provided them. However, this is an encouraging finding that suggests when a school or school district is holding these broader conversations, school librarians benefit.

Training through Coursework

Previous work has called for expanded course offerings about disabilities and building information about disability and accessibility into library science courses (Prendergast, 2016). However, no significant relationship was found between graduate coursework about ASD and confidence in supporting students with ASD in the school library setting. It is possible that school librarians benefit more from keeping current through ongoing trainings and educational opportunities beyond their baseline coursework. Introducing disability and inclusion concepts are important for students, but continuing those conversations while they are actually working in the field might have even more value.

Training about Evidence Based Practices

Very few participants in this study reported having any level of training on the 27 EBPs from the NPDC. Given the lack of graduate level training and relatively little experience with professional development geared toward students with ASD, it is perhaps unsurprising that very few participants reported familiarity and experience with these practices. The two practices that received the highest number of responses for the most training, modeling and reinforcement, are also common practices that are not specific to individuals with ASD. Additionally, given many students with ASD require supports in the area of communication, it is concerning how few participants reported receiving training in EBPs such as functional communication training (FCT) or picture exchange communication systems (PECS). It is clear additional training needs to focus specifically on improving knowledge and skills in implementing EBPs with this population.

Confidence

Despite a self-reported lack of training and education about ASD, more than half of participants in this study felt somewhat or very confident about supporting students with ASD in their school library. Future work should investigate what might account for these feelings. It is possible that the librarians in this study simply had years of classroom experience and have been able to learn on the job through individual interactions; it is notable that nearly half of all participants had worked in school libraries for more than eleven years, and only a small percentage reported working with no students with ASD at all during their career. While it is encouraging that more than half of participants felt confident in supporting students with ASD, this percentage increased for those who had post-graduate training.

Awareness and Inclusion

In general, participants in this study largely reported feeling that students with ASD should be included in regular library programming. Students with disabilities deserve access and to benefit from an education, (Individuals with Disabilities Education Improvement Act, 2004) and the library is part of the school environment for most students. Inclusion has benefits for students with ASD, their peers, and their teachers, including greater awareness and acceptance of diversity, reduced stigma, and opportunities for experiencing new social situations and practicing new social skills (Humphrey & Symes 2013; Roberts & Simpson, 2016; Sansosti & Sansosti 2012; Waddington & Reed 2006).

This study asked participants to quantify the number of students with ASD with whom they have worked. Similarly, the study asked participants to list the disability categories they support in the school library, ranking them by frequency. This assumes that school librarians are aware of all students' diagnoses. Unfortunately, this is likely not always the case, as some of the responses provided demonstrated a lack of information or awareness about students. If school librarians are not brought into the IEP process, they might not be aware of students who would benefit from additional support, particularly if those students are not served solely through a special education classroom. This is especially true if librarians are not educated to be aware of what characteristics to look for, in order to identify students who need more support in inclusive settings. Finally, many participants reported supporting a number of students with developmental

disabilities. It is not unusual for there to be students with ASD who receive a label of developmental disability, particularly when they are young. It is very possible these school librarians have worked with many more students on the spectrum than they realize. This makes the need for training and education about not just supports, but also inclusive services even more critical. If librarians are aware of ways to build in inclusive practices that support students with ASD, all students will benefit. Even if a librarian is not included in IEP meetings or aware of an individual student's need for services, the library environment and the librarian's practices can be designed to offer more support to those who would truly benefit. Simple steps include minimizing distractions in the library, creating visual schedules for story times or lessons, and ensuring that even if the library has collaborative spaces, there are still designated quiet rooms where students can step away and have a break (Anderson, 2021). These practices particularly help students with ASD and will also benefit other students who appreciate structure and a distraction-free learning environment. However, few participants reported having training in the EBPs identified for those with ASD, which means it is unlikely school librarians are employing these practices.

Implications for Practice

Results from this study indicate that school librarians should take the initiative to educate themselves through professional trainings and workshops beyond what is provided in coursework or through their school districts. Many of those who responded to this survey are doing so already, with 60% of all participants reporting at least one hour or more of training about ASD through workshops. School districts would be wise to support and promote such opportunities for their school librarians.

Autism-focused sessions appear in many professional library conferences, perhaps reflecting the increase in prevalence and overall awareness of autism (see Baucum, 2019b; Klipper et al., 2017). Schools should not only provide funding for school librarians to attend these events but should also encourage attendance. Learning from peers is especially valuable, as school librarians can learn about immediately implementable practices, particularly relevant to school libraries. Books and training material about ASD are available for librarians in general, and schools should ensure these are purchased and made available as part of professional development. Some web-based materials are free, including the site "Libraries and Autism: We're Connected," the Project Enable website which includes training videos, and the Project PALS online course (Florida State University, n.d.; Libraries & Autism, 2020; State Library of Illinois, n.d.). Exposing librarians to these sites is a simple first step toward education.

Multiple librarians in this study reported the barrier of, essentially, "you don't know what you don't know." These librarians felt that they did not have enough knowledge about ASD to even know where to begin. Graduate schools should ensure librarians are prepared at least with some baseline information about autism, so they know where to start. It is possible that this initial exposure could spark greater interest and inspire librarians to continue to pursue knowledge and opportunities on supporting their students with ASD.

Librarians can also learn from those in support roles at their schools and beyond. Fellow educators can be excellent resources to help school librarians understand best practices in the classroom. Similarly, school librarians should be encouraged to attend

available professional development opportunities with special education teachers, and perhaps even be invited to participate in IEP meetings to gain a better understanding of how to best support their students with ASD. School librarians in this study who reported that their school or district provided professional development specific to ASD, even if included within a larger disability context, felt more confident supporting these students in their school library than the total study population. Administration should take note of this finding and ensure school librarians are included when such trainings are offered.

School librarians might not be the first group of educators one thinks about when considering students with ASD, but results from this study should help to bring them into the conversation. This study illuminates the need to support school librarians' as they gain knowledge about ASD and work to support the students they serve.

Implications for Research

This study adds to the literature as it looked at how, and if, school librarians are prepared to support students with ASD. This includes their level of knowledge, training, and skills with this population, as well as knowledge of the EBPs that are effective for them. Unfortunately, school librarians reported low levels of training on ASD and little knowledge of EBPs for children affected. Future research should examine the barriers to professional development opportunities for school librarians, as well as the best delivery methods. Additionally, research should consider student grade (e.g., elementary, middle, high) to determine differing needs and how school librarians can best provide support. Finally, future research should investigate the attitudes and knowledge of school administrators regarding school librarians and the provision of professional development opportunities. Without support from administration, it is unlikely that school librarians will have the opportunities to pursue further education about ASD aside from taking the initiative themselves, so this understanding is critical.

Conclusions

Autism is prevalent in our communities, and school librarians, whether prepared for it or not, are already working with students on the spectrum. This study is an important step in understanding the ASD knowledge and related skills school librarians have when entering the profession, what opportunities they have to expand upon those skills, and what barriers they perceive. With this understanding, there are practical implications for school librarians, their colleagues, and their administrators. Education about supporting students with ASD through graduate education and school districts' professional development varies widely, and most librarians who responded to this survey had not received an abundance of information about ASD through either channel. It seems that the burden to improve their knowledge and skills is on individual librarians themselves, and they must seek out professional development actively to obtain information about supporting their students with ASD.

School librarians are interested in learning more and will need to be better prepared to support students with ASD as prevalence increases. This survey showed that those librarians who received training outside of coursework, were more confident in supporting students with ASD in the school library.

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Appendix

Evidence-Based Practices Identified by the National Professional Development Center on ASD

EBP	Acronym
Antecedent-Based Intervention	ABI
Cognitive Behavioral Intervention	CBI
Differential Reinforcement of Alternative, Incompatible, or Other Behavior	DRA/I/O
Discrete Trial Teaching	DTT
Exercise	ECE
Extinction	EXT
Functional Communication Training	FCT
Modeling	MD
Naturalistic Intervention	NI
Parent-Implemented Intervention	PII
Peer-Mediated Instruction and Intervention	PMII
Picture Exchange Communication System	PECS
Pivotal Response Training	PRT
Prompting	PP
Reinforcement	R+
Response Interruption/ Redirection	RIR
Scripting	SC
Self-Management	SM
Social Narratives	SN
Social Skills Training	SST
Structured Play Group	SPG
Task Analysis	TA
Technology-Aided Instruction and Intervention	TAII
Time Delay	TD
Video Modeling	VM
Visual Support	VS

Note: EBPs, along with a description of each, can be found in Wong et al. (2014).