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What Parents Tell Their Post-Secondary Students with Intellectual and Developmental Disabilities about Money

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Abstract

The purpose of this study was to learn what parents of young adults with intellectual and developmental disabilities (IDD) communicate in terms of financial literacy (skills, knowledge, attitudes, and behaviors); and how their financial literacy perceptions compare with their student's. This research builds on prior parental socialization of finances to include persons with IDD. Data for this study included a survey which was adapted from Jorgensen (2007) and administered to both parents and their post-secondary student. A focus group consisting of a smaller sample of parents was used to learn how parents encouraged their child's acquisition of financial knowledge, attributes, behaviors, and influences. This study extends research on parent-child communication about money to the special education population and offers practical implications for communicating financial matters.

*Keywords: F*inancial literacy, intellectual and developmental disability, parental socialization, self-determination, transition students

Introduction

For many students, graduating from high school is a time of growing independence. It often includes living on one's own, forming relationships, and managing finances; however, few youth with intellectual and developmental disabilities (IDD) have lived independently outside the family home since exiting high school (Newman, Wagner, Knockey, Marder, Nagle, Shaver, Wei, Cameto, Contreras, Ferguson, Greene & Schwarting, 2011). Financial literacy skills are one key aspect of independence that IDDs struggle with, in particular, youth with intellectual and developmental disabilities. Data reported in Wave 4 of the National Longitudinal Transition Study 2 (NLTS) (Newman et al., 2011) revealed many youth lack skills and behaviors associated with finances. Wave 4 data further indicated that (a) 59% of all youth with disabilities had a savings account, (b) 58% of youth with disabilities had a checking account and wrote checks, (c) 41.4% of students with disabilities have credit cards, and (d) 61.1% of the general population reported using credit cards. These statistics demonstrate the gap between students

with identified intellectual and developmental disabilities financial knowledge and the general population, illustrating the importance of teaching financial literacy skills to all individuals.

Providing financial literacy for IDDs is essential for greater independence, knowing the best resources and the best delivery systems to provide that knowledge are essential to educators. Although the role of parents and their perceptions about financial literacy have been explored for the general population (Jorgensen, 2007), it is unclear what the perceptions of parents and students with disabilities are which may provide insight to optimal delivery of information.

Theoretical Framework

An examination of the literature reveals that there are many definitions of financial literacy (Hogarth & Hilgert, 2002). According to the Organization of Economic Co-operation and Development (OECD) (2006), financial literacy is defined as a combination of awareness, knowledge, skill, attitude, and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being. Other authors are more specific, for example, Beverly and Burhalter (2005), describe financial literacy as encompassing "knowledge and skills related to money management, including the ability to balance a checkbook, manage a credit card, prepare a budget, take out a loan, and buy insurance" (p. 121). Yet, another perspective combines knowledge and understanding to plan and implement financial decisions (Hogarth & Hilgert, 2002).

A variety of models demonstrate the influencing factors that contribute to financial literacy. The authors utilized Deacon and Firebaugh's (1981) Family Resource Management Theory Framework found in Figure 1 as it includes multiple inputs that affect behaviors. Parental socialization was considered the input for this study as it influences youth's financial behaviors as outputs within their environment.

FIGURE 1. DEACON AND FIREBAUGH'S FAMILY RESOURCE MANAGEMENT MODEL.

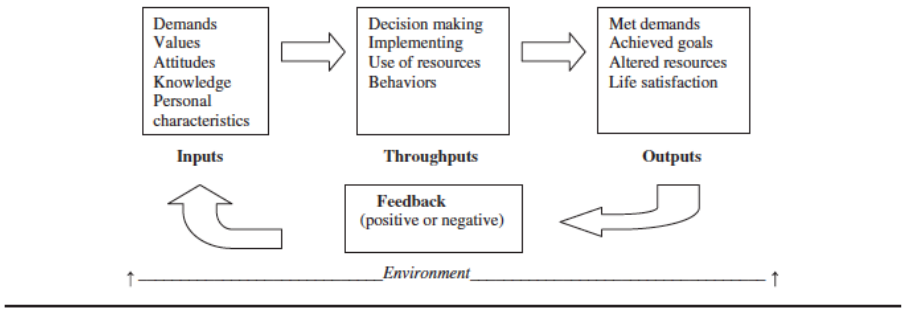

Figure 1: Deacon and Firebaugh's (1981) Family Resource Management Theory. This figure illustrates the multiple inputs that affect behaviors.

Deacon and Firebaugh (1981) developed the Family Resource Management Theory as a process with a systems orientation where management is ''the process of using resources to achieve goals'' (Goldsmith, 2005, p. 24). According to this theory, financial behavior is influenced by demands and available resources (e.g., knowledge, attitudes, and personal characteristics). The four stages of the model include inputs, throughputs, outputs, and feedback which loop to

explain how people make financial decisions. For this study the authors examined the inputs to address the perceived influence of parents on the financial literacy of young adults with IDD.

Research in family relations and consumer education suggest that children and young adults develop consumer skills by interacting with various socialization sources, including parents, and these in turn influence financial behaviors (Moschis, 1985; Webley & Nyhus, 2006). Parents and families are important socialization agents in the process by which children learn about money, develop financial management behavior (often indirectly by observation or participation) or through direct communication (Moschis, 1985), establish an emotional well-being (Eisenberg, Losoya, Fabes, Guthrie, Reiser, Murphy, Shepard, Poulin, & Padgett, 2001) and practice behavioral health (Lau, Quadrel, & Hartmen, 1990). Although socialization occurs throughout the lifespan, young adulthood is a critical socialization period regarding financial attitude and behavior outcomes (Shim, Xiao, Barber, & Lyons, 2009).

Literature Review

Influence of Family Relationships on Financial Literacy

Using the Family Resource Management Theory Framework, this literature review examines the components of financial literacy and how these influence the goal of financial self-sufficiency. Financial literacy is a balancing relationship between four conceptual areas which include financial knowledge, financial attitudes, influences, and financial behaviors (Jorgensen & Salvla, 2010, p.467). Within these four areas, how do individuals learn financial knowledge and behaviors to be successful, and how do parents impact financial attitudes/behaviors/knowledge of their young adults?

Although a majority of financial literacy skills are taught by parents and/or guardians either informally or formally, many parents do not have the skills to guide their young adults to become responsible economic consumers (Moschis, 1985; Jorgensen & Salvla, 2010; Lyons & Hunt, 2003). Therefore, if a parent does not have financial knowledge their child may be limited in their ability to make informed financial decisions as an adult as well (Grable & Joo, 1998; Jorgensen & Salvla, 2010). Many young adults' attitudes toward finances are related to their spending habits and behaviors which may also be influenced by their parents' attitudes (Jorgensen & Salvla, 2010, Hayhoe, Leach, & Turner, 1999). As an individual's level of financial knowledge increases, their attitudes and behaviors also tend to improve (Jorgensen & Salvla, 2010). Financial attitudes refer to the psychological tendency expressed when aspects of financial management are evaluated with some degree of agreement or disagreement, may be positively influenced by parents with a higher income level, and an increase in life experiences (Jorgensen & Salvla, 2010). Although parents may impact financial learning, disabilities may also play a role in an individual's financial knowledge and behaviors.

Students with Intellectual and Developmental Disabilities and Financial Literacy

The American Association for Intellectual and Developmental Disabilities (AAIDD, 2010) defined, Intellectual Disability, ID as a "disability originating before the age of 18 and characterized by significant limitations in both intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills" (para. 1). Intellectual functioning, or intelligence, refers to the mental capacity for learning, reasoning, problem solving, and other life

skills. An IQ score below 70-75 indicates deficits in intellectual functioning. Adaptive behaviors, crucial for everyday life, are defined as the collection of conceptual, social, and practical skills. Examples of adaptive behaviors include difficulties with problem solving, money use and management, time, number concepts, daily living, occupational skills and lack of self-determination skills

Being able to manage bank accounts and credit cards is an important step for young adults to become financially secure and responsible (Bell, Burtless, Gornick, & Smeeding, 2007). This can be more challenging for young adults with intellectual and developmental disability. Some positive influences on young adults' financial literacy relate to the level of educational attainment and household income. Young adults with intellectual and developmental disabilities who had completed post-secondary education were approximately three times more likely to have savings or checking accounts or credit cards than were young adults with lower levels of educational attainment (Ohio Department of Education, 2011). Also, young adults with disabilities from wealthier parent households (those with incomes of more than $50,000) were more likely than those from lower-income parent households ($25,000 or less) to have ever enrolled in a 2-year college (Ohio Department of Education, 2011).

The Role of Self-Determination in Financial Literacy

Individuals with IDD often do not have control of their own finances due to a lack of skills, opportunity, or both (Newman, et al., 2011). These individuals may lack the self-sufficiency to make key decisions about their lives. Research shows that students with intellectual and developmental disabilities who have more developed self-determined skills are able to make a more successful transition from high school to adult life (Kochhar-Bryant, Bassett & Webb, 2009). Students, moreover, who leave high school without developed self-determination skills are ill prepared, and less successful in their adult lives (Wehmeyer & Palmer, 2003). Although the literature supports the importance of self-determination, studies across special education disability categories find that students with IDD demonstrate less self-determination than their nondisabled peers (Wehmeyer, Palmer, Shogren, Williams-Diehm, & Soukup, 2013).

In their seminal work, Field and Hoffman (1994) described self-determination as knowing one's strengths, limitations, needs, and preferences well enough to analyze options and goals, and to determine a clear vision for one's future. Self-determined individuals choose their goals by assessing their needs, and by acting in ways to meet those goals. They are internally motivated to pursue their goals, which involves making a presence known, stating needs, evaluating progress toward meeting goals, adjusting one's performance, and being creative in problem-solving (Martin & Marshall, 1995). Doll, Sands, Wehmeyer and Palmer (1996) and Deci and Ryan (2000) identified several behaviors and attitudes defining self-determination namely problem-solving, choice-making, decision-making, goal setting, self-regulation, goal attainment, self-advocacy, self-awareness, and self-efficacy. Each of these skills has a characteristic developmental course, acquired through specific learning experiences. It is at this level of the framework that intervention to promote self-determination as an educational outcome can occur (Doll et al., 1996).

There are few programs that address financial literacy for students with IDD that include self-determination skills (Brown & Thaker, 2006). According to Mittapalli, Belson and Ahmadi (2009), programs and services for youth with disabilities in post-secondary programs are rare and those that do exist have not produced research that has evaluated effectiveness. Table 1 describes how each of the components of self-determination are defined in the literature, how they relate to financial literacy standards (JumpStart, 2017), as well as examples of strategies educators, paraprofessionals, and other school staff can use to promote the use of this skill.

Table 1
Alignment of Self-Determination with Financial Literacy Standards

Components of Self-Determination	Relationship to Financial Literacy Standards (JumpStart, 2017)
Problem-solving Problem solving refers to the capacity to identify a problem, generate possible solutions, evaluate the effect of each alternative, and ultimately choose the best option (Sands, D. J., & Doll, B., 2005).	**Investments** **Standard 2**: Evaluate investment alternatives. **Standard 4**: Make criterion-based financial decisions by systematically considering alternatives and consequences.
Choice-making Giving students the opportunity to make choices enables them to develop skills of demonstrating control and responsibility in their environment (Wehmeyer, Martin, & Sands, 2008).	**Financial Decision Making** **Standard 4:** Make criterion-based financial decisions by systematically considering alternatives and consequences.
Decision Making Decision making involves analyzing a situation to determine possible outcomes, choosing the best scenario for yourself at that particular time, and following through with your decision (Cabeza, Magill, Jenkins, Carter, Greiner, Bell, & Lane, 2013).	**Savings** **Standard 1:** Analyze the costs and benefits of various types of credit. **Financial Decision Making** **Standard 1:** Recognize the responsibilities associated with personal financial decisions. **Standard 2:** Use reliable resources when making financial decisions.
Goal and Attainment Goal setting and attainment skills require students to identify something they wish to work toward and develop a plan to reach that particular objective (Wehmeyer, Martin, & Sands, 2008).	**Employment and Income** **Standard 1:** Use a career plan to develop personal income potential and explore job and career options.
Self-Management and Self-Regulation Self-management and self-regulation skills involve students monitoring and assessing their own behavior, time management, and learning (Cabeza, Magill, Jenkins, Carter, Greiner, Bell, &	**Spending and Saving** **Standard 1:** Apply strategies to monitor income and expenses, plan for spending and save for future goals. **Standard 2**: Develop a system for keeping

Lane, 2013).	and using financial records.
Self-Advocacy and Leadership Self-advocacy and leadership skills involve having the ability and confidence to stand up for oneself, as well as having the knowledge of what to advocate for in achieving one's goals (Cabeza, Magill, Jenkins, Carter, Greiner, Bell, & Lane, 2013).	**Investments** **Standard 5:** Apply communication strategies when discussing financial issues. **Risk Management** **Standard 3**: Justify reasons to use health, disability, long-term care and life insurance.
Self-Efficacy and Self-Awareness Students who possess self-awareness and self-efficacy recognize their own strengths, limitations, and abilities. Moreover, they can apply this understanding to improve on their previous experiences and accomplishments.	**Financial Decision Making** **Standard 4:** Make criterion-based financial decisions by systematically considering alternatives and consequences. **Standard 8:** Use a personal decision plan.

With recent legislation, financial literacy regarding asset development is an essential topic in curricula for youth with IDD so they can make informed decisions about their lives. Asset development is based upon the ability to make sound short-and long-term financial decisions. These abilities include, but not limited to, investing (i.e., homeownership, stocks), types and benefits of savings, and increasing capacity to save and plan ahead (Mittapalli et al., 2009). One such savings option is an Individual Development Account (IDA) that will not impact their eligibility for federal benefit programs. Similarly, the Achieving a Better Life Experience Act (P.L. 113-295 [ABLE], 2014) was signed into law on December 19, 2014. This new law permits states to create ABLE programs which would allow qualified individuals with disabilities the opportunity to save money in a tax advantaged account without jeopardizing their eligibility for most federally funded tested programs (including Medicaid and to a certain extent Social Security benefits). Although federal law applies uniformly to all states, individual states may regulate ABLE accounts differently.

Although research on parental socialization of financial literacy within the general population is documented this study seeks to answer the following questions with the inclusion of parents of students with an intellectual disability:

1. How do parents and their young adult students' perceptions of financial literacy compare?

2. What do parents discuss with their young adult children with intellectual and developmental disabilities regarding finances?

Methodology

Participants

Demographic information of the parents and students was collected from 19 students and 27 parents completing the surveys (Table 2). The students ranged from college freshman to juniors with ages from 19-24. Students and parents were selected from a transition program at a large university that integrates inclusive classes, a typical college experience, and a transition

curriculum to assist students in achieving adult roles and a quality of life in a community of their choice. The program is for students who have completed high school requirements and are at least 18 years of age with an identified Intellectual or Developmental Disability, Traumatic Brain Injury, or Autism between the ages of 18-26.

The American Association for Intellectual and Developmental Disabilities (AAIDD, 2010) defined ID as a "disability originating before the age of 18 and characterized by significant limitations in both intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills" (para. 1). Intellectual functioning, or intelligence, refers to the mental capacity for learning, reasoning, problem solving, and other life skills. An IQ score below 70-75 indicates deficits in intellectual functioning. Adaptive behaviors, crucial for everyday life are defined as the collection of conceptual, social, and practical skills. Examples of adaptive behaviors include difficulty with problem solving, money use and management, time, number concepts, daily living, occupational skills and lack of self-determination skills.

The first year of the program is designed as a foundation with courses covering disability issues, personal development, health and wellness (including financial literacy), and preparing for a rigorous college experience. Year 2 allows students to extend their knowledge and skills in participating in college-level courses and other campus environments. The last two years focus on career-field specialization with courses in independent living, lifelong learning competencies, and career development and employment, as well as internships in the community where students apply their learning in jobs of their choice. Each student completes two years of financial literacy (one credit per semester).

Table 2
Demographic Characteristics of Transition Students and Parents

Variables	Frequency: Students	Frequency: Parents
Gender		
Women	10	15
Men	9	13
Race:		
Caucasian, non-Hispanic	16	25
Asian	1	0
African American	2	3
Multiracial	0	0
Other	0	0
Age		
18	0	

19	3
20	5
21	2
22	3
23	2
24+	4
Where students live	
On Campus	12
At Home	3
Renting an apartment	4
College education paid by	
Self	0
Parents	19

Survey Instrument

The College Student Financial Literacy Survey (CSFLS) (Jorgensen, 2007) based on research and a review of the literature of component parts of financial literacy was adapted for students with intellectual and developmental disabilities. Unlike Jorgensen's work in which only college students completed the survey, the researchers adapted the questions to be asked to both parents and transition students with an IDD. Similar to Jorgensen's survey, the revised CSFLS measures financial knowledge, attitudes, behavior, and perceived influences (e.g., parents), and includes various demographic factors. The revised survey consists of 24 questions, 11 demographic questions and takes approximately twenty minutes to complete. The financial knowledge section of the revised CSFLS has five items of which pertain to general financial knowledge. The financial attitudes section has five questions regarding students' and parents' perception of money and finances. Eight items pertain to the financial behaviors such as keeping records and reading financial information. Financial Influences include four potential sources of impact such as parents, school, and sources of financial information.

Focus Group

In order to better understand parental engagement in financial topics with their child, researchers recruited parents at an annual parent meeting. Eight parents agreed to a ½ hour focus group. Parents represented students who were in the program with children across the spectrum of intellectual and developmental disabilities. Researchers used a semi-structured interview protocol probing parents' current ideas and their role in helping their students learn financial literacy; the skills and learning domains they believe are most important to impart and how they engage with their children regarding finances.

Data Collection

Survey Data were collected at an end-of-year program for parents and students (from the college-based transition program described above), to prepare students with an IDD for adult life through academic pursuits, peer socialization, and career development. Students and parents both took the survey in separate sessions. After a 10-minute explanation of the purposes of the research, all participating parents and students completed the survey with the understanding that the study

was approved by the Institutional Review Board and they were free to not answer any or all of the questions. The focus group was held following a parent meeting.

Data Analysis

Quantitative Data. Researchers analyzed survey data using SPSS. Means were established on each of the items contained in the Likert Scale for the parents' and students' responses. A chi-square test was run to determine differences between parents and students on select questions. A .01 level of significance was used to analyze the data.

Qualitative Data. The approach to analysis approximated the *Sort and Sift, Think and Shift* method, with special focus on the data inventory, categorization, bridging, and data presentation phases (Curry, Nembhard, & Bradley, 2009; Maietta, 2008). All data from the focus groups were digitally recorded and transcribed. The authors created a matrix that described the summaries by themes related to the research questions. After summarizing data and constructing a matrix of parent responses, the authors generated a list of propositions about the data (Miles, Huberman, & Saldana, 2013) and developed a coding scheme to test and confirm the initial set of propositions. The authors then coded through a process that began with developing a set of codes from research studies, then used these codes during an initial review of data. Through this found in the results

Findings

Survey Results

Results from the surveys will be reported within the following four areas: financial attitudes, behaviors, knowledge, and influences. For each component of financial literacy, both parent and student data are reported. Results are reported first followed by summaries of the data represented in Tables 3, 4, 5, and 6.

The data within Table 3 identifies topics parents and their children found to be important within financial literacy. Most students expressed financial literacy was fun to learn (n=3) or that it was important (n=5) while parents felt it was extremely important to know because they want their child to be independent (n=19). Only one parent responded that it was not important because their child was not able to understand the concept because of their disability stating, "I am not sure what he can grasp, but he does understand cost of items, and then how much money he has in the present moment." Answers from parents again differed from their students' as parents were concerned about independence and felt that financial literacy was an essential key to that autonomy. Students however, found learning financial literacy was only important for the present. This theme re-occurred throughout the survey and focus groups.

Table 3
Topics Parents and Their Children Found Important

STUDENTS Percentage/ Frequency	Topic Thought to Be Important	PARENTS Percentage/ Frequency
17%* (n=11)	Budgeting	25%* (n=24)

7.5%* (n=5)	Investing	8.3% (n=8)
12%* (n=8)	Taxes	12.45%* (n=12)
12%* (n=8)	Credit	11.5%* (n=11)
9% (n=6)	Wills	3% (n=3)
15%* (n=10)	Life Insurance	3% (n=3)
3% (n=2)	Auto Insurance	2.2% (n=2)
7.5% (n=5)	Loans/debt	10.4%* (n=10)
12%* (n=8)	Credit Cards	17.5% * (n=18)
4% (n=3)	Saving Interest rates	5.2% (n=5)
-	Other	Government Aid Counting Money/Coins ABLE Account

Financial Attitudes

Of the 19 students, only four felt they could manage money well on their own and a majority parents (n=14) expressed that they wanted their students to know more about financial literacy. Table 4 provides greater detail of the differences between parents and students' financial attitudes.

Table 4
Financial Attitude Survey Results

Parents	$\chi 2$ & p-values	Students
5A. I feel my student is in control of their financial situation False (18) I don't know (3) True (4)	$\chi 2$=13.758 p value .001 < 0.01	5A. I feel in control of my financial situation. False (3), I don't know (8), True (8)
5P. My student thinks disability insurance is less important than life insurance. False (3), I don't know (23), True (2)	$\chi 2$= 9.337 *p*-value .009386 < .01	5P. Disability insurance is less important than life insurance. False (6), I don't know (8), True (4)
5Q My student thinks homeowner's or renter's	$\chi 2$=25.4601 *p*-value 0.00001 < .01	5Q. Homeowner's or renter's insurance is important.

insurance is important. False (2), I don't know (23), True (2)	False (0), I don't know (2), True (15)

Results of the chi-squared test of independence revealed 3 out of the 8 survey questions identified in Table 4 under financial attitudes were statistically significant. Other items that were not significant included: Parents and students both agreed that keeping and organizing financial records was important, both tend not to worry much about money, and both knew where they spent their money. Students felt they would be able to use their future income to achieve their goals (n=13) while parents were undecided (n=12). In this case, the students either overestimated their ability while the parents were more realistic or underestimated their student's ability. Both parents and students were unsure about their child's knowledge regarding the safety of credit cards.

All of the survey items represented in Table 5 were statistically significant on the chi-squared test for independence when comparing what parents felt their child's financial behavior was and what their child's responses to financial behaviors were. This signifies that there was a difference between what students do and what the parents know that they do. It may be the case that at the college level, parents don't know what their students are doing or do not communicate with them enough to have a full understanding of their financial behaviors.

Table 5
Financial Behavior Survey Results

Parents	**χ2 & p-values**	**Students**
6. Which of the following describes your student best? Very thrifty (7), somewhat thrifty (7), neither thrifty or spending focused (11), somewhat spending focused (3), rarely saving (7), very spending money focused (0), never saving (0)	$\chi 2 = 13.4195$ *p*-value .009108 < .01	6. Which of the following describes you best? Very thrifty (7), somewhat thrifty (5), neither thrifty or spending focused (0), somewhat spending focused (3), rarely saving (2), very spending money focused (0), never saving (0)
7. What kinds of financial accounts does your student have? Savings (23), Checking (1), money market (1), Cd (1), Stocks (1), Bonds (1), mutual funds (1), IRA (1), Other (0)	$\chi 2 = 16.5723$ *p*-value .00234 < .01.	7. What kinds of financial accounts do you have? Savings (13), Checking (13), money market (3), Cd (5), Stocks (3), Bonds (5), mutual funds (1), IRA (0), Other (0)
8. How does your student keep their financial records?	$\chi 2 = 11.4286$ *p*-value .00962 < .01.	8. How do you keep your financial records?

I don't keep records (14), I keep some records (7), I keep very detailed records (1), I do not know (2)		I don't keep records (2), I keep some records (6), I keep very detailed records (4), I do not know (6)
9k. My student reads to increase their financial understanding. False (21), I don't know (2), True (2)	$\chi 2 = 11.7724$ *p*-value of .002777 < .01.	9k. I read to increase my financial understandings. False (6), I don't know (4), True (8)
9l. My student reads over and understands apartment leases and loan agreements before they sign them. False (19), I don't know (1), True (1)	$\chi 2 = 14.5986$ *p*-value of .002194 < .01.	9l. I read over and understand apartment leases and loan agreements before I sign them. False (3), I don't know (4), True (4), Don't own or have one (7)
9m. My student puts money into an investment account. False (20), I don't know (2), True (3)	$\chi 2 = 18.554$ *p*-value of .000094 < .01.	9m. I put money into an investment account. False (4), I don't know (8), True (6)
9n. My student has a disability insurance policy. False (22), I don't know (11), True (2)	$\chi 2 = 25.5684$ *p*-value of 0.00001 < .01.	9n. I have a disability insurance policy False (2), I don't know (10), True (6)
9o. My student is covered by a homeowner's or renter's insurance policy. False (12), I don't know (1), True (10)	$\chi 2 = 14.0285$ *p*-value of .000899 < .01	9o. I am covered by a homeowner's or renter's insurance policy. False (12), I don't know (3), True (2)

It is interesting that 7 students did not rent but all students said it was important to have renter's insurance, and only 2 were covered under an insurance policy (See Table 5). Although students may believe one statement, their financial actions may not always match their attitudes. This may be due to their parent's influence, their income, or other outside factors that impact how they manage their money.

In this survey, items related to financial influences or financial knowledge showed a statistically significant difference between parents and their children. Questions regarding financial influence discussed where students learn about managing money, what they learned, how finances were handled in their families, and how they compared to their parents regarding their likelihood to save and spend. Financial knowledge discussed the following topics: net worth, accounts, checks, credit cards, balances, and insurance. Parents and their students both had similar answers

as to where the best place was to store money; why an individual should have insurance; and taxes deducted from paychecks.

Focus Group Findings

With respect to the study's first research question, three main themes emerged: (1) All parents wanted their children to be financially independent, (2) Most parents concealed personal financial information from their children, and (3) Students and parents understand consumer education. The focus group of twelve parents enabled the researchers to better understand what the parents discussed with their children, but also revealed reasons why they discussed or concealed particular topics. This qualitative approach allowed for a richer and deeper understanding of these issues and created the basis of a pilot study.

All parents wanted their children to be financially independent. Parents unanimously wanted their child with disabilities to live financially independent lives. They shared examples of how they socialized their child in terms of money. For example, one parent who was a CPA said that he would play the game of *Life* with his son. "I am not sure if he understood what was happening, but I wanted him to see that there is more than day to day living." A mother was thrilled that her son was able to go to a fast food chain and place an order. She defined self-sufficiency by his ability to NOT be taken advantage of by adults. One parent suggested that she wanted to help her daughter be more responsible and the best way was to watch her fail stating, "It is easier to pick up the pieces with $20.00 than $2,000, then she will learn to better think of mistakes in the future."

Although all wanted their children to be financially independent, three families had their children in guardianship. Guardianship is a legal proceeding in which someone (usually a family member) asks the court to find that a person is unable to manage his or her affairs effectively because of a disability. A guardian steps in the shoes of the person with a disability and makes the decisions for them. Not only is self-efficacy and autonomy curtailed, but these parents expressed that they did not believe their child could be independent, although they would "love for that to happen." Again, only one parent wanted to know more about the legal issues surrounding the IDEA program that would enable their children to save more.

Most parents did not discuss financial information with their children. Of the 12 parents in the focus group, all of them expressed that they never disclosed personal financial information to their children. When asked why, seven of the parents suggested that they "did not want to burden their children with the information," while two other parents did not want to divulge personal information. The remaining three parents suggested that their child could not understand what that information meant. As parents said:

"Jordan has no idea about finances of our family."
"I don't think she would understand."
"I don't think he can handle a checking or savings account, if he can't make change."
"I am not sure she could handle some of the investments that we have as a family. My other daughter who is in college knows all of that information."

Students and parents understand consumer education. Although parents avoided personal financial information for reasons discussed above, they did share examples with the children

regarding the value of earning and saving money. They showed financial socialization with consumer skills by talking with their children about how savings accounts and credit cards work and about the importance of being responsible with money. One parent commented, “My child thinks about the current or present situation, and all I do is think about the future. Although he does not know much about investments or how to calculate interest, he does know the value of money and is a good consumer.”

Discussion

This study examined the financial information that parents discuss with their young adult child with intellectual and developmental disabilities. In addition, perspectives on financial attitudes, behaviors, influences, and knowledge, were compared among parents and their children with IDD and potential reasons for similarities or differences were explored. With respect to what parents shared with their children, three themes emerged. First, parents unanimously wanted their child with disabilities to live financially independent, yet they did not disclose financial information regarding investments, but often shared consumer information. Second, survey results showed there were significant differences between what parents and children with disabilities held in terms of financial behaviors and attitudes. Lastly, parents and teachers shared similar perceptions about the valued need for supporting the development of self-determination competencies (Grigal, Neubert, Moon, & Graham, 2003; Wehmeyer, Agran, & Hughes, 2000).

Although loosely connected to the present study, a plausible explanation for the lack of association between parent and student perceptions may be the tendency of students with disabilities to overestimate their skills, behaviors, and attitudes. This tendency has been noted in relation to academic abilities (Stone & May, 2002), self-determination abilities (Trainor, 2005), and emotional intelligence (Tucker, 2009). It is also possible that general and special education teachers within this study underestimated the self-determination skills, behaviors, and attitudes of students with disabilities. Studies by Carter, Lane, Pierson, & Glaeser (2006) and Hogansen, Powers, Geenen, & Gil-Kashiwabara (2008) indicated teachers had lower expectations for their students with disabilities and underestimated their capacity to be self-determined. This possibility aligns with the results of previous research which found teachers perceived students with disabilities to have limitations regarding self-determination (Agran, Snow, & Swaner, 1999; Grigal et al., 2003; Wehmeyer et al., 2000).

Compared to similar research from general education populations, findings in this study suggested positive parent-child financial interactions contribute to the development of sound financial behaviors. The authors believe that parents should be educated about the importance of positive financial discussions with their children and expectations of their children regarding financial management. In light of these findings, conversations about financial topics, that is, discussions about upcoming/recent financial transactions, can be seen as "teachable moments" (i.e., opportunities for parents to instruct their children about responsible financial management). The authors believe that transition and financial management educators need to include ways to connect with parents as part of their curricular planning. Educators may communicate or include exercises for home that outline ways parents can initiate discussions with younger children about the benefits of tracking their personal budgets. Parents can also let their children know their expectations regarding their financial future behaviors. Providing parents with suggestions for

initiating conversations about financial topics as well as available resources for both parents and children may be especially helpful.

Limitations

There were four limitations to this study. As the findings relied on self-report measures in the surveys, there exists a potential for participants to under or overestimate their abilities and/or the abilities of others. Second, the sample size was small and the sample of parents and students were not equal, as some students did not have their parents present. This difference in sample size may have slightly impacted the findings as every student did not have a parent in which to match survey information. Another factor that may influence the results is the absence of arithmetic skills that are related to financial literacy such as making and counting change. Finally, this study was limited to one college transition program, therefore, caution must be used when generalizing findings to other school districts, grade levels, and/or individuals engaged in alternative instructional arrangements.

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The Perceived Effectiveness of Using Mindfulness as a Strategy for Special Educators in Coping with the Stress of their Work Environment

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Abstract

The present study focused on the perceived effectiveness of using mindfulness as a stress-reduction technique among special educators. Studies have shown more focus on using mindfulness with students, versus mindfulness for personal use by educators. Yet, teachers of children with special needs face unique social-emotional challenges in carrying out their roles and their well-being can be compromised as a result. This increased level of stress can lead to job burnout, evidenced by the high attrition rate of special educators. For this study, a quantitative survey was constructed, and then answered completely online and anonymously by special educators and educators in inclusive settings. The results showed that most participants agreed special educators have a high level of stress in their working environment, and that this stress can lead to job burnout. Additionally, over three-quarters of respondents felt mindfulness could help decrease the stress of the work environment yet only one-quarter of respondents stated they had been trained for both mindfulness in the classroom and personal use. Despite any limitations, the results indicate implementing a mindfulness practice among special educators would be a welcome and beneficial method for decreasing the stress and increasing the well-being of these important educators.

Keywords: special education, mindfulness, perception

The Perceived Effectiveness of Using Mindfulness as a Strategy for Special Educators in Coping with the Stress of their Work Environment

Presently, mindfulness is a mainstream phenomenon in education, being implemented as a tool to assist our K-12 students in both public and private schools. While there are numerous curricula developed for classroom implementation, far less emphasis is placed upon training those who will be teaching this material to the students (Thomas, 2015, p. 120). Compounding the situation, teachers of children with special needs face unique social-emotional challenges in carrying out their roles. As a result, the health and well-being of these individuals is often compromised, specifically, regarding their increased stress levels. Mindfulness has been shown to decrease stress levels in individuals (Brown, Ryan, 2003, p. 843; Harker, Pidgeon, Klaassen, & King, 2016, p. 632; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013), yet the effectiveness of such methods may hinge upon the user's perception of the technique. The aim of this current research was to gauge the perceived effectiveness of decreasing the stress levels and increasing the well-being of special educators by using mindfulness. Directly related, participants also stated whether they believed stress levels of special educators are, in fact, high, and whether this could lead to job burnout. Ultimately, the high attrition rates of special educators were a clear marker of professional concern, and many studies have shown stress as one of the main causes of burnout (Flook, Goldberg, Pinger, Bonus, & Davidson, 2013; Jennings, et al., 2013; Roeser et al., 2013; Roeser, Skinner, Beers, & Jennings., 2012).

To answer the question of this study, a survey was administered to special educators, within the United States, asking them to provide their thoughts about and experiences with mindfulness. More specifically, participants provided their perceptions about mindfulness and its effectiveness as a strategy for decreasing stress and increasing the well-being in the lives of special educators, both in and out of the classroom. Additional questions were asked of participants regarding any pre-service or in-service mindfulness trainings they may have experienced and their overall feelings about such trainings.

The participants were special educators (in various settings) or general educators in inclusion classes. These educators were selected based on the criteria that they work directly with students with special needs, on an instructional level.

Literature Review

Mindfulness

Mindfulness was originally found in the teachings of Buddhism where it was considered a "path to enlightenment" and not psychological in nature. In 1979, Jon Kabat-Zinn brought mindfulness to the forefront in America when he founded the Stress Reduction Clinic at the University of Massachusetts Medical School, where he eventually re-termed the approach "Mindfulness-Based Stress Reduction" (MBSR). At this time, the religious connection and framework to mindfulness was removed and MBSR became a scientific and psychological approach to stress reduction. Often called the Father of Mindfulness, Kabat-Zinn's operational definition of mindfulness is "being present and cultivating moment-to-moment non-judgmental awareness" (Rechtschaffen, 2014, p. xix). He lists numerous benefits to the individual including reduced stress, lowered blood pressure, improved memory, and decreased incidence of depression and anxiety (Kabat-Zinn, 1990). It is this facet of mindfulness that this research study aims to expand upon - specifically the stress-reduction capabilities – to measure current perceptions of its effectiveness among special educators.

Numerous study results have shown the positive effects of mindfulness, including mindfulness being associated with greater well-being (Alahari, 2017; Brown, Ryan, 2003, p. 832; Harker et al., 2016, p. 632; Jennings et al., 2013) and emotional regulation (Lutz et al., 2013). These studies specifically gauged the effectiveness of mindfulness as a psychological well-being enhancer, on multiple levels.

Mindfulness, in general, and its beneficial effects across the board have been researched at ever increasing rates throughout the past twenty years, when you look at the number of related research articles since 2000. As stated by Greg Flaxman and Lisa Flook, Ph.D. from UCLA's Mindful Awareness Research Center, "Researchers' interest in mindfulness practice has steadily increased as studies continue to reveal its beneficial effects" (n.d., p. 1). The directly correlated increase in research on mindfulness with educators' use of mindfulness is raising questions by some researchers regarding the effectiveness of evidence-based studies on mindfulness.
In 2015, Kelly Thomas found there to be a lack of research *about* educator mindfulness, compared to the *use* of mindfulness by educators. Additionally, she found there to be significantly more research on teaching mindfulness to the students, versus the teachers (p. 120).
In 2012, a study was completed that delivered a five-week mindfulness training course to parents and teachers of children with special needs. Roeser et al. performed this research as their study

claimed that, "No rigorous studies have assessed whether mindfulness training (MT) might be an effective strategy to reduce stress and cultivate well-being and positive caregiving in these adults" (2012, p. 1). Yet, in 2017, a review was completed that questioned whether mindfulness research methodology was effective and improving over time. The studies that fit their criteria for review were randomized clinical trials of mindfulness-based interventions (Goldberg et al., 2017). Also, in 2017, Emerson et al. conclude a "current lack of convincing evidence of the positive effects of teacher MBIs {(Mindfulness Based Interventions)} on teaching and pupil outcomes…" (p. 1147). Other recent studies critically evaluated current and past research covering meditation and mindfulness, showing concern regarding lack of evidence and proper research practices, indirectly supporting Goldberg's stated concerns (Creswell, 2017, p. 508; Van Dam et al., 2017). The above studies show a concern among researchers as to whether there is an evidence-based method to determine the effectiveness of mindfulness trainings and use. As an aside, this research project will be based on the educators' perception of mindfulness' effectiveness and will not be using clinical or experimental methods.

In addition to these studies questioning the research on the effectiveness of mindfulness trainings, an area of interest is whether mindfulness is just a passing fad or trend that takes the place of medical interventions. In, *Mind the Hype: A Critical Evaluation and Prescriptive Agenda for Research on Mindfulness and Meditation*, Van Dam et al. argue that current studies may be giving the public misinformation, which can lead them to be misled and disappointed (2017). A negative perception of mindfulness-based practices and trainings among special educators may be linked to such misinformation and lack of evidence, even though the potential for effectiveness may exist.

Special Educators and Stress

Job burnout and its subsequent attrition rate are a significant problem within the special education field as, "Approximately 13% of special education teachers leave the workforce every year (Cook & Boe, 2007, as cited in Garwood, Werts, Varghese, & Gosey, 2018, p. 31). While there are discrepancies regarding the exact numbers, attrition rates of special educators are considerably high. There are many factors at play in the dropout rate of special educators and the field of special education is fraught with challenges, both traceable and not. A study by Reed on special educators' perspectives on burnout within their profession stated overwhelming paperwork as the leading cause, followed by lack of support, curriculum challenges, behavior challenges and parent involvement (2016). Additionally, without an increased self-awareness in the special education classroom, teachers can internalize students' struggles and carry that weight (Garwood et al., 2018, p. 39). "It was emotionally exhausting for some teachers to strive continuously to help students and see little success" (Garwood et al., 2018, pg. 37). The large amount of input when working with students in special education can sometimes lead to frustration due to a lack of evidence of student growth. A 2016 study by Harker et al. found the following:

> In addition to individual effects on mental health and psychological well-being, the organizational consequences of burnout among human service professionals include; increased turnover and absenteeism, unproductive work behaviors, and reduced job-satisfaction. However, these negative outcomes not only effect the organization but also affect the human service professional's ability to effectively care for others.…increased mindfulness has been shown to be correlated positively with several aspects of

> psychological well-being, and negatively associated with burnout and secondary traumatic stress (p. 632).

There is emerging literature that demonstrates the beneficial effects of mindfulness against educator burnout. One study found that teachers' practice of mindfulness was negatively associated with emotional exhaustion, depersonalization, and perceptions of low accomplishment (Abenavoli, Jennings, Greenberg, Harris, & Katz, 2013), which are key components of burnout. Other recent studies agree with the use of mindfulness for self-care to assist educators in effectively dealing with their professional stress and, therefore, decrease burnout (Flook et al., 2013; Jennings, et al., 2013; Roeser et al., 2013; Roeser et al., 2012). Additionally, in 2017, a study by Lopez stated that, "Educators' mindfulness is one aspect of social-emotional competence that may protect them from experiencing burnout and its negative consequences" (p. 4).

This self-care by educators may prove to be an obstacle, as many may feel their busy professional schedule does not allow time to learn or use mindfulness. In such a case, Carter (2015) states strategies, based in neuroscience, that can assist in reducing the perception of busyness to allow for a foundational mindfulness practice. She states that even small doses of consistent self-care activities can help decrease the detrimental effects of stress (Carter, 2015). However, it is not certain whether special educators will accept mindfulness as an effective method of stress reduction and whether this attitude or perception could in fact alter the effectiveness of any mindfulness-based trainings. Special educators must recognize how stress affects them, for them to buy-in to any type of mindfulness or stress-reduction strategy for self-care. Set or stalled perceptions and mindsets can potentially lead to conflict and professional burnout, especially in the constantly progressing field of education. The educators' chosen perceptions can either help or hinder the way that individual takes care of their mental and physical health. As stated by Hassed and Chambers (2014), "the term meditation can evoke attitudes, assumptions, and stereotypical notions" (p. 6), which may decrease any potential effectiveness of such training.

Even with a potential bias against or hesitation towards mindfulness, a general self-awareness regarding your mental state and well-being should be in place for self-preservation and prevention of occupational burnout. Brunsting, Sreckovic, and Lane discussed the need for an awareness to be present regarding potential burnout among special educators. They stated, "There is no quantitative evidence to support the adage knowing is half the battle when it comes to burnout. However, SET [special education teacher] awareness of the risks of burnout to themselves and other practitioners working in special education, especially those working with students with ED or ASD, is an important prerequisite to mitigating the impact of burnout" (2013, p. 702).

Pre-Service Teacher Training

Fives, Hamman & Olivarez give evidence that pre-service special educators can begin burning out during the student teaching experience (2007). Therefore, it stands that implementing an intervention of tools during pre-service training would benefit the future educators by alleviating this risk of burnout. "By nature of the students they serve, special education teachers have taken on a challenge" (Garwood et al., 2018, p. 39).

In, *The Way of Mindful Education: Cultivating Well-Being in Teachers and Students,* Rechtschaffen speaks of giving pre-service teachers the skills of a mindfulness practice early on, allowing them to then share that practice with their classroom students (2014). As the old airline adage goes, "Put on your own oxygen mask first, before you assist others". This rings especially true in the field of education.

Other recent studies showed potential benefits of using mindfulness with graduate students in the field of education. Hartigan's study of pre-service teacher candidates reported "changes in their own level of stress and demeanor because of mindfulness and MBSR daily practice, both in their personal and professional lives" (2017, p. 157). Similarly, in 2015, Tarrasch performed a qualitative analysis on mindfulness meditation training for graduate students in special education and found there to be a perceived decrease in their stress levels, among other well-being enhancers such as better sleep, feelings and behaviors. "Such curricula may help students to cope with the stress and anxiety experienced in their daily work and to develop a more therapeutic presence and more effective management of their treatment or classroom setting" (Tarrasch, 2015, p. 1331).

In-Service Teacher Training

Time constraints do not allow all school districts to implement teacher trainings on health, well-being or mindfulness, yet there is evidence to prove these professional development programs could be worth the time and resources to assist with teacher retention. Studies on in-service teacher stress-reduction programs show decreased teacher stress levels, and overall greater health and well-being, (Kolbe & Tirozzi, 2011; Sneyers, Jacobs, & Struyf, 2016) yet more research is needed to focus in on special educators specifically. Cavanagh, Strauss, Forder, and Jones point out a common concern, in that mindfulness training is still relatively new in educational settings yet studies show it has strong support in clinical settings (2014) and this concept has been supported by Goyal et al. (2014). This concern is also supported by Emerson et al. who make the point that, "School priorities are academic performance, and yet, there have been no large-scale, rigorous studies that show a strong relationship between mindfulness training for either teachers or pupils and attainment outcomes" (2017, p. 1147). This may lead to district and building administrators' hesitancy to implement and spend time on any individual or systemic mindfulness trainings, as their confidence may be low due to limited evidence of stress-reducing benefits for their teachers. Once again, the perception can be a barrier without sufficient evidence. In contrast, a study by Sharp in 2015 spoke of the benefits of systemic mindfulness trainings, including decreased stress and increased emotional regulation on both an individual and administrative level.

The broad spectrum of research covered here shows an overall generalization that mindfulness training, in multiple forms, can be beneficial to the well-being of individuals, including special educators. Yet, there is also agreement among researchers that a lack of evidence-based methods and best practices for studying mindfulness leads to consumer confusion. This confusion may filter down to districts and individual educators, leading to various perceptions on the topic. The following section will cover the procedure and methodology of the present study, explaining how the researcher will gather responses from participants regarding their individual perception on the effectiveness of using mindfulness as a stress-reduction technique.

Methodology

Participants

The participants in this study were all educators, located in the Northeastern part of the United States. This included special educators who taught in both self-contained classes and who used the push-in and pull-out model. In addition, the participants also included teachers working as the general education teacher in an inclusive classroom, and one-to-one special educators. The criteria for educator selection was based on the educators working in a school setting and working directly with students with special needs on an instructional level.

Procedures

For this study, a quantitative survey was completed for this research topic and the survey was conducted completely online and anonymously, by various special educators. To create a quantitative survey, statements regarding mindfulness, special education and stress reduction techniques were categorized and listed using Google Forms for surveys, and responses were scaled on a Likert-type scale, using numbers one through five. One was "strongly disagree", two was "disagree", three was "neither agree nor disagree", four was "agree", and five was "strongly agree". After consent was received via email from school building administrators, the survey was distributed to education professionals for their participation consideration. The participants received a link to the google form for the survey and they chose which questions, if any, they wanted to fill out. Once the respondent completed the survey and hit "submit", their response was automatically sent to the researcher who had no identifying data or information on any of the participants, except from the answers they provided. Aside from the demographic questions, the survey provided research-related statements and the participants answered according to the defined Likert-type scale based on their experience and perception.

Data Collection and Analysis

Once IRB approval was received, school building administrators were contacted with the IRB consent form, asking for permission and assistance in distributing the stated copy and survey link to their building educators via email. The timeline for the data collection took place over a ten-day survey period and the instrument used to collect the data was an anonymous survey using the google form for surveys platform. Participants received a stated deadline in the distributed email as to when the survey was to be completed and submitted, if they chose to participate. Regarding the safeguarding of information, the google form survey was completely anonymous with no identifying information collected, submitted or stored. The data collected from the responses was stored in a password protected environment online and was not accessible to any person other than the researcher. Therefore, the participants' confidentiality was completely protected during the entire process.

Analysis Method and Purpose

This research project intended to better understand the perceptions that special educators may have with regards to the effectiveness of using mindfulness strategies to decrease their stress and increase their health and well-being. The distributed survey contained statements regarding mindfulness, occupational stress, teacher burnout, pre-service teacher training, in-service teacher training, and other related items. The submitted responses were then analyzed by the researcher to determine a possible connection between results, past studies, theory and practice.

The following results section will give detailed descriptions of the data results from the survey responses, categorized into groups aligning with the survey statement categories.

Results

The aim of this research study was to gauge the perceived effectiveness of using mindfulness as a stress-reduction technique among special educators. Within this question, the study surveyed special educators' views on multiple subcategories directly related to mindfulness and the field of special education. These results are categorized and spelled out below and include: demographics, mindfulness fundamentals, special educators' role and stress, pre-service training, and in-service training.

Demographics

Of the thirty-two respondents, over 90% were females and all were from the Northeastern United States. Almost 60% of respondents fell in the 30-49 age groups, and 32% were age 50 or over. Seventy-five percent of participants have been teaching for ten or more years.
Sixty-nine percent of respondents held a master's degree, and another 15% had a master's degree in progress, leading to greater than 80% of respondents having graduate study experience. Regarding roles, more than 78% of respondents were general education teachers in inclusive classrooms, with the remaining respondents being special educators in either self-contained classrooms, as a one-to-one with a student, or in a push-in/pull-out model. See Table 1 for complete demographic data.

Table 1
Participant Characteristics

Characteristic	**Variable**	**%[a]**
Region	*Northeastern U.S.*	100
Gender	Female	91%
	Male	6%
	Unknown	3%
Years Teaching	0-2	15%
	3-5	7%
	6-9	3%
	10-15	23%
	16 & over	52%

Age	21-29	10%
	30-49	58%
	50 & older	32%
Education	Undergraduate degree	100%
	Master's degree	69%
Type of Educator	Special Education Teacher (various settings)	20%
	General Education in inclusion class	80%

[a] *Percentages are approximations rounded to the nearest percent.*

Mindfulness

Mindfulness Foundational Statements in the survey reported on participants' views regarding mindfulness fundamentals and any personal experience participants had with mindfulness. Table 2 shows results of the mindfulness foundational survey items among special educators and general educators in inclusion classrooms. The data shows more than 65% of respondents reported having a solid grasp on the definition of mindfulness, and 25% were neutral on this response. When asked about the necessary inclusion of a seated meditation being part of a mindfulness practice, respondents seemed unsure, or neutral, on this statement, with over 40% responding "neither agree nor disagree". When asked about their personal mindfulness practice, more than 62% of respondents stated they do not have one, with 28% responding in the positive.

Table 2

Responses to Mindfulness Foundational Statements

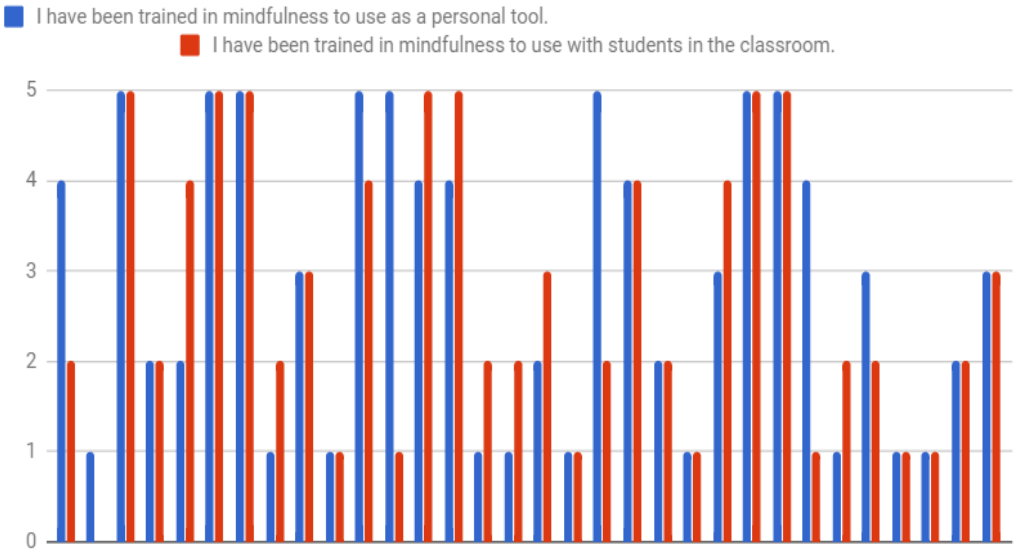
	I feel I have a solid grasp on the definition of mindfulness.	I believe seated meditation must be a part of a mindfulness practice.	I believe mindfulness has a religious connotation.	I have a regular mindfulness or meditation practice.	I have been trained in mindfulness to use as a personal tool.	I have been trained in mindfulness to use with students in the classroom.	Mindfulness is just a passing "fad" or trend.
Scale*	%	%	%	%	%	%	%

5	32	9	0	9	25	22.5	0
4	34	16	6	19	16	13	6
3	25	41	3	9	12	10	28
2	6	28	28	25	16	32	19
1	3	6	63	38	31	22.5	47

* 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree.

Regarding the respondents' perception of mindfulness having a religious connotation, greater than 90% did not view there to be a connection. Additionally, participants were asked to reply with whether they believed mindfulness was just a passing "fad" or trend, with 67% disagreeing, and 6% in agreement.

Figure 1
Comparisons of responses between personal and classroom training



While Table 2 shows the percentages of respondents who have or have not been trained in mindfulness for either personal use, or for use in the classroom, Figure 1 displays this data for individual responses. The researcher felt it was important that this figure show comparisons between individual participant's responses regarding whether they were trained in mindfulness for personal use versus being trained in mindfulness for use in the classroom with students. This additional figure is included to distinguish between the comparison of responses on a summarized scale against possible individual response differences. Based on the individual response comparisons, 28% of participants agree that they were trained for both personal use *and*

for use in the classroom. Thirty-eight percent of respondents state they were *not* trained in mindfulness for either personal use or for use in the classroom. Twenty-two percent of respondents showed a discrepancy between being trained in the two types of mindfulness.

Special Educators and Stress

The following survey items were phrased to seek participants' perceptions on the role of the special educator regarding any related stress, burnout, and accompanying techniques. See Table 3 for a complete set of results for this category. One hundred percent of respondents were either neutral or agreed/strongly agreed that special educators have a high level of stress in their work environment. When asked if they felt a high level of stress can lead to job burnout among special educators, 93% agreed and just over 6% did not agree. When asked if they felt special educators needed to implement techniques to combat the stress of their work environment, 87% of respondents agreed or strongly agreed. Thirteen percent were neutral, and 0% of respondents disagreed with this statement. This statement was followed up with questions regarding techniques used for stress reduction. When asked about personal stress reduction techniques, 51% stated they do have methods used for stress reduction. When asked their perception of mindfulness being an effective tool for special educators, 77% agreed, with only 10% in disagreement.

While 81% of respondents agreed or strongly agreed that mindfulness can reduce the stress of and increase the well-being for special educators, only 29% stated they use mindfulness as a method for stress reduction. Of the respondents, 20% felt they do not have enough time to learn or use mindfulness, and 53% felt they did have enough time to learn and use mindfulness. Only 9% of participants agreed there are better methods than mindfulness for stress reduction, but 87% felt mindfulness should be combined with other techniques for optimal stress reduction.

Table 3

Responses to Special Educators' Role Statements

	Special educators have a high level of stress in their work environment.	Special educators need to implement techniques to combat the stress of their work environment.	Special educators' increased stress levels can lead to job burnout.	I have specific stress reduction techniques that I use for my well-being.	Mindfulness can be an effective personal tool for special educators.
Scale*	%	%	%	%	%
5	64	56	68	32	32
4	26	31	26	19	45
3	10	13	3	29	13

2	0	0	3	13	7
1	0	0	0	7	3
	Mindfulness can reduce the stress of and increase the well-being for special educators.	I use mindfulness as a method for stress reduction.	I do not have enough time to learn or use mindfulness.	I believe there are better methods than mindfulness for stress reduction.	I believe mindfulness should be combined with other techniques for optimal stress reduction.
Scale*	%	%	%	%	%
5	23	16	3	0	39
4	58	13	17	9	48
3	16	29	27	52	10
2	3	23	23	26	0
1	0	19	30	13	3

* 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree.

Pre-Service Training

Table 4
Responses to Pre-Service Training Statements

	My teacher education/training program offered workshops and/or classes on mindfulness as a stress reduction technique.	Teacher education/training programs should have optional workshops and/or classes to teach mindfulness as a method for stress reduction.	Teacher education/training programs should have required workshops and/or classes to teach mindfulness as a method for stress reduction.
Scale*	%	%	%
5	7	48	28
4	3	31	17

3	10	17	41
2	21	3	14
1	59	0	0

* 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree.

The pre-service training section contained three statements that asked participants about their pre-service training programs and any possible workshops or classes that were offered on using mindfulness as a stress reduction technique. Table 4 contains the complete results from this section.

Eighty percent of respondents stated their pre-service training programs did not have any workshops or classes on using mindfulness for stress reduction. The following two statements were asked to gauge whether respondents felt pre-service training programs *should* offer these types of classes. Seventy-nine percent of respondents agreed that pre-service programs should offer optional workshops or classes, while only 45% agreed these mindfulness workshops and classes should be mandatory.

In-Service Training

Table 5

Responses to In-Service Training Statements

	My school district offers mindfulness training as a method for stress reduction for their teachers.	School districts should offer optional training on using mindfulness as a method for stress reduction.	School districts should have mandatory training on using mindfulness as a method for stress reduction.	District mindfulness trainings for special educators are a waste of time and resources.
Scale*	%	%	%	%
5	7	32	10	3
4	19	52	32	3
3	19	16	26	16
2	23	0	26	26
1	32	0	6	52

* 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree.

The in-service training section contained four statements that asked participants about their in-service mindfulness training programs, if any, and whether they felt these types of workshops should be offered on an optional or required basis.
Twenty-six percent of participants agreed that their district did offer mindfulness training as a method for stress reduction for their teachers, and 55% stated their district did not. Yet, 84% of respondents felt these types of trainings should be offered on an optional basis, and 42% felt they should be required for district teachers.
When asked about their perception of whether district mindfulness trainings for special educators were a waste of time and resources, only 6% agreed with this statement. Seventy-eight percent disagreed, and 16% of respondents felt neutral about this statement.

Summary

In summary, the survey for this study determined that most respondents felt they had a solid grasp on the definition of mindfulness and did not perceive mindfulness as just a passing "fad" or trend. In comparing possible mindfulness training for either personal or classroom use, over one-quarter of respondents stated they *were* trained for both areas, with just under 40% of respondents stating they were *not* trained in either method.

Ninety percent of respondents agreed that special educators have a high level of stress in their work environment, with nearly all respondents agreeing this stress can lead to job burnout. Over three-quarters of respondents felt mindfulness can help combat this work-related stress, yet just over half felt they had enough time to learn and use mindfulness.

Regarding pre-service training programs, less than one-quarter of respondents stated their program had mindfulness workshops or classes. Over three-quarters of participants felt there should be optional mindfulness pre-service trainings, and less than half felt these pre-service trainings should be required.

For in-service training programs, one-quarter of participants stated their district offers mindfulness trainings for stress reduction, and over three-quarters felt there should be optional trainings available for teachers by their district. These results and their implications will be discussed and interpreted next in the discussion and conclusion section.

Discussion and Conclusion

The intent of this study was to investigate the perceived effectiveness of using mindfulness as a strategy for special educators in coping with the stress of their work environment. The goal was to gauge the significance of the various factors applied to this research topic regarding special educators' perceptions on mindfulness, occupational stress, pre-service mindfulness training and in-service mindfulness training.

Participants included thirty-two special educators and general educators in inclusive settings, from the Northeastern United States. All survey responses by participants were anonymous, aside from the given demographic information, as listed in Table 1. Through the quantitative interpretation of participants' responses to survey statements, the researcher has made relevant

statistical connections within the data. These connections cover the categories of mindfulness, special educators' role and stress, pre-service teacher training and in-service teacher training, and will be interpreted below.

Mindfulness

In the present study, mindfulness is the central theme around which perceptions and answers are based. While the central focus of this research is on the perceived effectiveness of mindfulness by special educators, the author felt it essential to first understand the participants' background with mindfulness.

To give an opinion on a topic or idea, it is beneficial to first have a firm understanding of the idea. Most respondents in this study either agreed or strongly agreed that they had a solid grasp on the definition of mindfulness. Although, there is no *one* universally agreed upon definition of mindfulness, leading to the potential for various mindfulness definitions being "grasped" by the participants. Additionally, due to the difference in age groups of the respondents, different generations could have varied beliefs and definitions of mindfulness. For example, respondents under age 30 did not feel they had a solid grasp on the definition of mindfulness, yet the uncertainty of this understanding decreased as the age group increased. This direct correlation does agree with current findings, as researchers are finding the broad range of mindfulness-based interventions that have sprung up in recent years have a lack of evidence-backed research, which can lead to confusion by the public (Van Dam et al., 2017). Older generations may have grown up with a clearer and more succinct mindfulness definition and description as the introduction of mindfulness into the United States began arising in the late 1970's. While the researcher recognizes the possible discrepancy in the definition of mindfulness between generations, they acknowledge that the definition of mindfulness plays a lesser role than in its practice, the latter of which leading to a more accurate perception.

Regarding applications of mindfulness, over 40% of participants agree that they have been trained in using mindfulness as a personal tool, yet, only 35% state they were trained in using mindfulness with students in the classroom. This contradicts the 2012 Kelly study, where she stated that teachers were gaining more training in mindfulness for use in the classroom versus personal use. This could be due to the current study's small sample size, or due to increases in personal mindfulness trainings for educators over the past 6 years. Figure 1 breaks down the individual responses for this survey response comparison. These results show that 66% of respondents were either equally trained in both personal and classroom mindfulness uses, or not trained in either. This infers that most educators who are exposed to mindfulness, whether through voluntary means or mandatory trainings, are trained in both methods. Conversely, educators who are not exposed to mindfulness do not receive trainings in either method. Since only 6% of respondents feel mindfulness is just a passing fad or trend, this does not seem a significant factor involved in mindfulness training responses.

Special Educators' Role and Stress

Along with mindfulness, special educators and their high levels of occupational stress are the focus of the current study. The results show that one hundred percent of respondents were either neutral or agreed/strongly agreed that special educators have a high level of stress in their work environment. Additionally, 94% of the respondents agreed that this high level of occupational

stress can lead to job burnout. These results agreed with current statistics regarding educator attrition. Since 78% of respondents state they have been teaching for six or more years, their responses infer they are among the resilient 50% that did not leave the profession within the first five years (Feistritzer, 2011) demonstrating a possible predilection toward a more solution driven attitude. As a result, these educators may be more open to various methods of stress reduction to combat work fatigue, including a greater perception of using mindfulness. Therefore, most participants for this study acknowledged the challenge that special educators face and their subsequent consequences, leading us to the question of training and implementation.

While over 40% of respondents stated they were trained in using mindfulness as a personal tool, it is unknown whether these trainings were received outside of their professional environment. Of the respondents, just under 30% state they do use mindfulness as a stress reduction technique. Assuming the above stated participants are the same respondents that stated they were trained in using mindfulness as a personal tool, that results in a 75% applied use. The author feels this is a significant finding within the current study, denoting a strong correlation between personal mindfulness trainings and perceived effectiveness of the function of mindfulness by the user. Additionally, over 80% of these educational participants agreed that mindfulness can reduce the stress and increase the well-being of special educators. This statement refers directly to the research topic in question and further reinforces the author's findings of positive perceived effectiveness of using mindfulness as a stress reduction technique. Yet, when compared to the relatively low percentage of participants who have been trained in using mindfulness as a personal tool, the author speculates that a lack of accessibility of these trainings may be at the root of this disparity. The following sections will reinforce this hypothesis based on interpretation of the results.

Pre-Service Teacher Training

Ten percent of study participants stated their teacher training program offered some type of training on using mindfulness for personal stress reduction, yet almost 80% agreed or strongly agreed that pre-service teacher programs should offer at least optional mindfulness training programs. Research has shown success with training pre-service teachers through their graduate studies, resulting in decreased stress levels and greater well-being (Hartigan, 2017; Tarrasch, 2015). Based on the study's previous results regarding the participants' strong interest in using mindfulness for stress reduction, the author agrees with beginning mindfulness training during graduate studies. In this post-secondary setting, there may be more time and resources available compared with K-12 public systems, allowing for these types of workshops or classes.

In-Service Teacher Training

While only 26% of respondents state their current district offers workshops on mindfulness training for teachers' stress reduction, over 80% agree or strongly agree that districts should offer at least optional workshops on this topic. These numbers correlate to this study's previously stated results regarding educators' strong interest in using mindfulness for stress reduction but not having the proper training.

While many school districts offer Professional Development opportunities for their staff, both optional and required, time constraints often lead districts to use those times for curricular focus. Emerson et al. present the idea that the main priorities of school districts remain academic, and

no large-scale studies have been completed that show the direct connection between mindfulness and its benefits for teachers (2017). Although time constraints during school hours may be a hindrance, implementing a wellness initiative may offer teachers strategies to reduce their stress and increase their well-being, thereby decreasing teacher burnout.

Limitations

Like all research studies, there are limitations that exist within the present study. For example, all participants were from the Northeastern United States, which displays a specific subset of the teaching population. A more thorough study extension can test various regions of the United States for comparison. Additionally, the sample size of the participant population was relatively small, at 32 in total. Increasing the sample size would give a broader and clearer range of perceptions among various special educators.

Recommendations for Future Research

The current study has many opportunities for future research, based on the included findings. One recommendation would be a quasi-experimental study, comparing participants who perceive mindfulness as an effective technique for stress reduction among special educators with participants who do *not* believe mindfulness is an effective technique for stress reduction among special educators. This study would further develop the understanding of whether a perception of an idea or concept can, in fact, alter the potential effectiveness of that stress-reduction technique. Participants can all go through the same eight-week MBSR training, using scaled responses at timed intervals to gauge the effectiveness of the technique.

Despite the limitations, the results of the present study indicate that implementing a mindfulness practice among special educators in various settings, and among general education teachers in inclusive settings, would be a welcome and beneficial method for decreasing the stress and increasing the well-being of these important educators. The evidential high rates of burnout and attrition among special educators warrants intervention, and this study adds to the educational research findings that special educators are open to learning about and using mindfulness as a method for stress reduction.

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The Influence of Introductory Coursework on Preservice Teachers' Sense of Self-efficacy Towards Teaching in an Inclusive Classroom

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Abstract

Since the majority of students receiving special education services spend most of their school day in the general education classroom (Kena et al., 2015), it is imperative that teacher preparation programs equip preservice teachers for that context. This quantitative study explored the influence a single introductory special education course had on the efficacy beliefs of preservice teachers towards teaching in an inclusive classroom. The study included 100 participants that were undergraduate students enrolled in an introduction to special education course. Students were given the Teacher Efficacy for Inclusive Practices survey (Sharma, Loreman, & Forlin, 2012) before and after the course to determine if the course influenced their self-efficacy beliefs. Descriptive statistics and paired samples t-tests were used to analyze the data. The results indicated that the course had a significant, positive influence on preservice teachers' self-efficacy beliefs toward teaching in an inclusive classroom. Discussion and implications of the findings as well as future research are examined.

Keywords: preservice teachers, self-efficacy beliefs, inclusion, teacher education, teacher preparation

The Influence of Introductory Coursework on Preservice Teachers' Sense of Self-efficacy Towards Teaching in an Inclusive Classroom

Today's schools are tasked with educating diverse students, including students with special needs. The U.S. Department of Education reported that approximately 50% of all students with disabilities spend the majority of the school day in a general educational classroom and an additional 30% spend at least part of the day in a general education classroom (Kena et al., 2015). Since 80% of students with disabilities are in an inclusion classroom (Kena et al., 2015) teacher preparation programs need to equip preservice teachers with the necessary skills to teach students with diverse learning needs.

The majority of teacher preparation programs report incorporating some type of inclusion focused coursework into their curriculum, mostly in the form of a stand-alone courses such an introduction to special education course (Harvey, Yssel, Bauserman, & Merbler, 2010; Holland, Detgen, & Gutekunst, 2008). One of the primary goals of inclusion-focused coursework is to foster strong self-efficacy beliefs in preservice teachers so they feel prepared to teach students with disabilities in inclusive classrooms. Generally, after taking inclusion-focused coursework, preservice and in-service teachers frequently report having a positive attitude toward inclusion and students with disabilities; however, they do not report feeling prepared to teach in an inclusive classroom (Costello & Boyle, 2013; Garriott, Snyder, & Miller, 2003; Jobling & Moni, 2004).

The lack of efficaciousness toward teaching in an inclusion classroom after coursework is concerning because teachers' sense of self-efficacy is strongly linked to factors such as increased student achievement, effective classroom teaching characteristics, and personal characteristics that positively impact their teaching (Allinder, 1994; Garcia, 2004; Knoblauch & Hoy, 2007; Pajares, 1996; Soto & Goetz, 1998). Considering this finding, it is prudent for teacher preparation programs to understand and address preservice teachers' sense of self-efficacy toward teaching in inclusion settings.

Review of Literature

Theoretical Framework

This study was built on Albert Bandura's (1977) social cognitive theory, which encompasses the construct of self-efficacy. Social cognitive theory is a learning theory which asserts that people learn through observing others complete a task. The replication of an observed behavior is influenced by personal, behavioral, and environmental factors. Social cognitive theory suggests that observational learning is more likely to occur if the observer has a high degree of self-efficacy. Self-efficacy is one's belief that he or she can successfully perform a specific task (Bandura, 1977). It has been suggested that preservice teacher preparation is an ideal time to foster efficacious beliefs toward inclusion because their beliefs are being formed by their coursework and field experiences (Forlin, Loreman, Sharma, & Earle, 2009; Harvey, Yssel, Bauserman, & Merbler, 2010; Woodcock, Hemmings, & Kay, 2012). This study utilized Bandura's construct of self-efficacy to explore how an introductory special education course influenced preservice teachers' self-efficacy beliefs toward teaching in an inclusive classroom.

Inclusion Coursework Models in Teacher Preparation

Given the significant number of students with disabilities educated in general education, teacher preparation programs have been faced with the challenge of effectively preparing preservice teachers. To meet this challenge, teacher preparation programs have made modifications to their curricula and course requirements. For example, Harvey et al. (2010) surveyed a national sample of education faculty members from higher education institutions and found that 35% of teacher preparation institutions offered an introduction to special education course and 26% offered a course focusing on inclusion, which means 61% of the total respondents surveyed offered at least one course on inclusion and teaching exceptional students.

There are varying models for structuring the design of preservice teacher coursework. One option is through the program enhancement model (Peterson & Beloin, 1998) which consists of adding single courses to the curriculum or infusing inclusion content into existing courses. In addition, other studies have found that the most widely used method for providing instruction to preservice teachers about students with special needs is a stand-alone course focused on inclusion (Gao & Mager, 2011; Holland et al., 2008). While teacher preparation programs are working toward creating positive educational experiences for their preservice teachers, there is wide variety in how inclusion focused coursework and field experiences are designed (Brownell, Ross, Colon, & McCullum, 2005; Forlin & Chambers, 2011; Kim, 2011).

Preservice Teachers' Attitudes and Self-Efficacy Beliefs

Research has shown that preservice teachers are more likely to possess a positive attitude toward inclusion and students with special needs after they participate in coursework focused on inclusion in the classroom (Garriott et al., 2003; McHatton & Parker, 2013; Rakap, Cig, Parlak-Rakap, 2017; Shade & Stewart, 2001). Sze (2009) analyzed literature on pre-service teachers' attitudes toward students with disabilities and found that inclusion education for preservice teachers fostered an understanding of disabilities that translated into a positive attitude toward inclusion. Similarly, Sharma, Forlin, and Loreman (2008) and Kim (2011) found that both stand-alone courses and integrated inclusion training yielded more positive attitudes, but an integrated approach to inclusion training produced a statistically higher gain in attitudes towards inclusion. Another common finding was that field experiences were more likely to produce positive attitudinal changes if they were designed in a manner that allowed preservice teachers to learn more about disabilities (Boling, 2007; Peebles & Mendaglio, 2014). Despite coursework with or without field experiences, research has generally shown that a positive attitude does not consistently translate into preservice teachers feeling prepared to teach in inclusive settings; in fact, they may even feel less willing to include students with disabilities into their own classrooms (Costello & Boyle, 2013; Garriott et al., 2003; Jobling & Moni, 2004). In studies by Costello and Boyle (2013) and Gigante and Gilmore (2018) possessing a positive attitude toward inclusion was helpful, but that disposition alone was not enough to produce an efficacious teacher. However, the concept of self-efficacy has been shown to be a strong indicator of preservice teachers' success in their future teaching career (Chesnut & Burley, 2015).

In-Service Teacher Self-Efficacy

A teacher's sense of self-efficacy has been attributed to student outcomes, such as achievement (Cantrell, Almasi, Carter, & Rintamaa, 2013; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998), enhanced motivation (Bandura, 1997), students' feelings of self-efficacy (Anderson, Greene, & Lowen, 1988), and a more positive outlook on school (Ross, 1992). The research suggests that teachers who have strong beliefs in their ability to teach effectively are more likely to believe that their students can achieve academically (Pendergast, Garvis, & Keogh, 2011; Woolfolk, Rosoff, & Hoy, 1990). In contrast, teachers with a low perception of their ability to teach are more likely to blame their students' inability to learn on outside factors (Woolfolk, Rosoff, & Hoy, 1990). Positive self-efficacy beliefs in the realm of student outcomes and perception of student abilities are vital for general and special educators. This is especially relevant for educators whose students are faced with compensating for disabilities to be academically successful.

Teacher self-efficacy beliefs have also been related to classroom teaching characteristics, such as the willingness to use innovative teaching techniques, displaying confidence and enthusiasm in teaching, and exhibiting greater levels of organization and planning (Allinder, 1994; Garcia, 2004; Tournaki, Lyublinkaya, & Carolan, 2009). Highly efficacious teachers tend to be less critical of students who make errors and are more likely to spend extra time with students who are struggling (Allinder, 1994; Gibson & Dembo, 1984). They are also more inclined to utilize small groups and include cooperative learning opportunities (Allinder, 1994). In addition, teachers' self-efficacy was also found to be related to effective classroom management (Gordon, 2001). Particularly relevant to special education is that a teacher's sense of self-efficacy has been found to influence decisions involving special education referrals and educational placement. Soodak and Podell (1994), for example, found that general and special education teachers with a higher sense of self-efficacy were more likely to recommend less restrictive placements and were more willing to adapt teaching strategies to meet individual needs than those with lower feelings of self-efficacy.

Finally, teacher self-efficacy beliefs have been related to personal attributes that influence their teaching. These characteristics include the willingness to try new strategies, collaborate, and demonstrate persistence when faced with teaching related obstacles (Allinder, 1994). This is in addition to being more committed to the profession, staying longer, and lower burnout rates (Allinder, 1994; Brouwers & Tomic, 2000; Milner, 2001; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). These qualities have direct links to the necessary requirements of being a special educator, such as participation in a multidisciplinary team, implementation of innovative instructional strategies that meet individual student needs, and commitment to the profession when faced with challenging circumstances (Soto & Goetz, 1998). Given the extensive relationships between teachers' sense of self-efficacy and their teaching practices, it is wise for teacher preparation programs to consider the best methods to develop preservice teachers' sense of self-efficacy during their training years (Peebles, 2012).

Purpose of the Study

Our study examined how a single introductory special education course, which focuses on inclusion, influenced preservice teachers' sense of self-efficacy toward teaching in an inclusive classroom. Since many teacher preparation programs offer a course or courses that focus on inclusion content, we sought to examine how a traditional course, without a field experience, influenced preservice teachers' self-efficacy beliefs. This study focuses on preservice teachers that are early in their preparation because Bandura (1977) found that self-efficacy beliefs are more malleable in the early developmental stages of learning a task and are often more difficult to change once the beliefs have been established. The study was guided by the following research question: Is there a relationship between completing a special education introductory course and preservice teachers' self-efficacy toward teaching in an inclusive classroom?

Methods

Participants

The participants in this study were undergraduate preservice teachers enrolled in an introductory special education course at a midsize Midwest University. The majority had not yet applied to

the teacher education program but were following the academic path to gain admittance and pursue teacher licensure. The demographics of the participants are represented in Table 1.

The sections of the course were taught by two adjunct instructors, one of them being the researcher of this study. Two of the sections were offered on campus and three were taught asynchronously online. The course had been standardized which means that the content, assignments, and assessments were parallel between sections. The course included lectures and activities including topics pertaining to special education such as history, legislation, collaboration, identification, evaluation, educational programming, continuum of placements, related services, and a variety of disabilities categories (emotional/ behavioral disorders, specific learning disabilities, intellectual disabilities, autism spectrum disorders, other health impairments, hearing impairment, and visual impairments).

Table 1
Participant Demographics (N=100)

Description	Percentage
Gender	
Male	16%
Female	83%
Other	1%
Age	
17-19	72%
20-22	21%
23-25	3%
25-30	4%
30 and up	0%
Major area	
Early childhood education	6%
Elementary education	34%
Secondary education (minor)	27%
Special education	11%
Elementary/ early childhood (dual)	4%
Elementary/ special education (dual)	11%
Other	6%
Non-licensure	1%
Class standing	

	Freshmen	51%
	Sophomore	32%
	Junior	10%
	Senior	6%
	Data missing	1%
GPA		
	4.0-3.5	46%
	3.4-3.0	29%
	2.9-2.5	22%
	below 2.5	3%

Instrumentation and Data Collection

Data were collected using a pre-existing, validated, and self-report survey called the Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma et al., 2012) and a demographic questionnaire. Data were collected at the beginning and end of the course, but since one of the course instructors was also the researcher the analysis did not begin until after the course had concluded and final grades were assigned. Research collaborators were responsible for maintaining the documents and data until the dual-role was no longer an issue of concern. The study received IRB approval before data collection began.

The TEIP is made up of 18 items pertaining to the participants' perception of their ability to successfully perform inclusive teaching practices. Each statement is worded in a positive manner and is directed toward carrying out a specific task. All 18 statements are assessed through a 6-point Likert item scale consisting of 'strongly disagree', 'disagree', 'disagree somewhat', 'agree somewhat', 'agree', and 'strongly agree'. The highest possible score on the scale was 108 which indicated a very high sense of self-efficacy toward teaching in an inclusive classroom. Conversely, 18 was the lowest possible score and it indicated a very low sense of self-efficacy toward teaching in an inclusive classroom. The TEIP scale is made up of three subscales that are comprised of six items each. The three subscales are efficacy to use inclusive instruction (EII), efficacy in collaboration (EC), and efficacy in managing behavior (EMB). The three subscales allow for a fine grain analysis of the construct of efficacy toward teaching in an inclusive classroom.

Sharma et al. (2012) reported that the content validity of TEIP was confirmed by six other faculty members, excluding the developers, who were identified as authorities in educational psychology and inclusive education. The developers used an exploratory factor analysis on the data from 607 preservice teachers from Canada, Australia, Hong Kong, and India to determine internal reliability. They found that the three factors (EII, EC, and EMB) on the instrument accounted for 64.5% of the total variance. In addition, Cronbach's alpha for the TEIP was strong (.89), and the subscales of efficacy to use inclusive instruction, efficacy in collaboration, and efficacy in managing behavior were .93, .85, and .85. Follow up studies on the TEIP scale report

Cronbach's alpha as .88 and .91 respectively (Malinen, Savolainen, & Xu, 2012; Savolainen, Engelbrecht, Nel, & Malinen, 2012). The results indicate that the TEIP scale was a good fit for this study because it adheres to Bandura's (1997) suggestion that instrumentation should be specific to the task measured.

Results

To learn if preservice teachers' sense of self-efficacy toward teaching in an inclusive classroom changed over the course of the semester, paired samples *t*-tests were run on the overall sense of self-efficacy as well as the TEIP's subscales of efficacy to use inclusive instruction, efficacy in collaboration, and efficacy in managing behavior. The analyses compared pre-and post-survey data for participants in all five sections of the course.

To address the research question, "Is there a relationship between completing a special education introductory course and preservice teachers' self-efficacy toward teaching an inclusive classroom?" a paired samples t-test compared the TEIP scores on the pretest and posttest administration of the survey. There was a significant difference in the scores for the posttest (M= 91.32, SD= 9.79) and pretest scores (M=78.09, SD=13.82); t (99) = 9.49, $p < .001$. The results suggest that when preservice teachers completed this introduction to special education course, their sense of self-efficacy towards teaching in an inclusive classroom positively increased. Cohen's d calculation was used to compare the effect size between the means and had an effect size of 1.12 standard deviations, which is considered a large effect size (Cohen, 1992).

Subscales and ranked responses. Each subscale included six questions specifically pertaining to the content. Feelings of efficacy toward the use of inclusive instruction and collaboration had relatively close means for both the pre- and post-test administration, and resulting in gains of 4.68 points for instruction and 4.62 points for collaboration. Efficacy in managing behaviors also saw an average increase in total efficacy (+3.89 points), but consistently lagged behind the other two categories in overall change. In sum, all the subscales demonstrated an increase in preservice efficacy beliefs, as indicated in Table 2.

Table 2
TEIP Subscale Analysis

Subscale	Pretest Mean *SD*	Posttest Mean *SD*	Difference	t	df	*p*
Inclusive Instruction	26.00 *4.64*	30.68 *3.64*	+4.68	-9.93	99	.000
Collaboration	26.75 *5.06*	31.37 *3.53*	+4.62	-8.58	99	.000
Managing Behaviors	25.36 *4.97*	29.25 *3.52*	+3.89	-7.67	99	.000

Pre-survey TEIP items with the highest mean score are displayed in Table 3 as well as, items with the lowest mean score in Table 4.

Table 3
Three TEIP Items with the Highest Mean Scores, Pre-Survey

Rank	Item	Mean	SD
1	3. I can make parents feel comfortable about coming to school.	4.91	.92
2	13. I am able to work jointly with other professionals and staff (e.g. teacher assistants, other teachers) to teach students with disabilities in the classroom.	4.86	.95
3	4. I can assist families in helping their children do well in school.	4.85	.99

Table 4
Three TEIP Items with the Lowest Mean Scores, Pre-Survey

Rank	Item	Mean	SD
1	16. I am confident in informing others who know little about laws and policies relating to the inclusion of students with disabilities.	3.29	1.44
2	17. I am confident when dealing with students who are physically aggressive.	3.29	1.30
3	10. I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated.	4.07	1.16

TEIP post-survey items with the highest mean score are displayed in Table 5 as well as, items with the lowest mean score in Table 6.

Table 5
Three TEIP Items with the Highest Mean Scores, Post-Survey

Rank	Item	Mean	SD
1	12. I can collaborate with other professionals (e.g. teachers, related service providers) in designing educational plans for students with disabilities.	5.45	.68
2	13. I am able to work jointly with other professionals and staff (e.g. teacher assistants, other teachers) to teach students with disabilities in the classroom.	5.41	.68
3	14. I am confident in my ability to get students to work together in pairs or small groups.	5.34	.62

Table 6
Three TEIP Items with the Lowest Mean Scores, Post-Survey

Rank	Item	Mean	SD
1	17. I am confident when dealing with students who are physically aggressive.	4.44	1.04
2	7. I am confident in my ability to prevent disruptive behavior in the classroom before it occurs.	4.77	.71
3	5. I can accurately gauge student comprehension of what I have taught.	4.83	.77

In summary, the results indicated that an introduction to special education course did influence preservice teachers' sense of self-efficacy toward teaching in an inclusive classroom. The paired samples *t*-tests indicated that the overall change in scores was significant (overall mean increased by 13.19 points). Each efficacy subscale (inclusive instruction, collaboration, and managing behaviors) showed that the means increased between the pre and post administration.

Discussion

The study found that completing this introduction to special education course resulted in a strong, positive change in overall self-efficacy beliefs toward teaching in an inclusive classroom. This corroborates the findings of several prior studies (Leyser, Zeiger & Romi, 2011; Shade & Stewart, 2001; Taylor & Ringlaben, 2012). It is important to note that several other studies found that coursework elicits minimal changes in self-efficacy beliefs or found it could even negatively impact self-efficacy beliefs toward teaching students with disabilities in an inclusive classroom (Forlin & Chambers, 2011; Freytag, 2001; Hastings & Oakford, 2003). Any further research that provides clarification on the development of self-efficacy beliefs in preservice teachers, including the current study, adds to the developing body of knowledge.

Mean changes in pre-and post-TEIP scores revealed that each of the subscales (efficacy to use inclusive instruction, collaboration, and managing behaviors) increased, but efficacy in managing behaviors was consistently lower than the other two subscales. Relatedly, the unease with managing behaviors has been noted in prior studies that showed preservice teachers feel less positive and less inclusive when students with emotional or behavioral disabilities are considered (Hastings & Oakford, 2003; Peebles, 2012).

Limitations of the Study

First, since data collection spanned across only one semester and from a single institution, only one set of preservice teacher responses was analyzed so a clearer picture of the development of self-efficacy beliefs could be gained if more participants across more semesters were surveyed. In addition, findings may not generalize to other institutions that possess demographic variables that significantly differ, and findings may not be representative of all preservice teachers in the nation. An additional data collection limitation was the use of self-report survey data. The use of

self-report data runs the risk of allowing participants to choose socially acceptable answers within the course context or to answer carelessly (Northrup, 1997).

Data were collected from five sections of the same course, but three of the sections were offered through an asynchronous online format and two were offered face to face. Although all five sections were standardized and highly parallel, the delivery format could have been an influencing factor on the development of the preservice teachers' sense of self-efficacy toward teaching in an inclusive classroom.

Implications

The study's findings reveal some potential programmatic and instructional gaps that teacher preparation programs should work to remediate. First, the broadest implication for practice that can be taken from this study is that completing an introduction to special education course may significantly and positively influence preservice teachers' self-efficacy beliefs toward teaching in an inclusive classroom. Since findings from prior literature have yielded differential results, these findings assist in clarifying the important role that similar courses have in preparing preservice teachers to teach in an inclusive classroom. Since the introductory course examined in the study was also delivered as a stand-alone inclusion-focused course, it is more likely that the results can be generalized to teacher preparation programs that employ courses with similar content, delivery formats, and objectives. The findings of this study should further impress upon teacher preparation programs that inclusion-oriented courses are valuable.

Second, the data showed that the participants feel considerably less efficacious toward managing behaviors than they do toward other aspects of teaching in an inclusive classroom. While the TEIP subscale results did indicate that the managing behaviors domain increased between the pre- and post-survey administration, it was consistently ranked as the least improved, and two of the three lowest items on the post-survey were in response to addressing disruptive and physically aggressive behaviors in the classroom. Based on this finding, teacher preparation programs and teacher educators should place more emphasis on instruction and practicum experiences that include best practices regarding positive behavioral interventions and supports (Christofferson &Sullivan, 2015). Since self-efficacy beliefs are more malleable in the early developmental stages, teacher preparation programs should ensure that classroom and behavior management is being taught early in preservice teachers' training and provide strong models in their practicum experiences.

Implications for Research

While the present study helped clarify the role an introduction to special education course has on preservice teachers' self-efficacy beliefs towards teaching in an inclusive classroom, further research in this area is necessary since similar previous studies had differential findings. The following three studies would provide more breadth and depth to the research domain. First, a longitudinal follow up with the same population would provide deeper insight into the long-range significance the introduction course had on their self-efficacy beliefs toward teaching in an inclusive classroom. Ideally, the participants would be surveyed during their introductory course (present study), at the end of their coursework, after student teaching, and at the end of their first-year teaching. A longitudinal study could provide rich data on the development of preservice

teachers' self-efficacy beliefs. Second, the TEIP survey was chosen for this study because it is task specific and has not been widely used in the United States. However, it would be valuable to conduct a comparative analysis of other similar self-efficacy instruments, such as the Teacher Efficacy Scale (Gibson & Dembo, 1984) and Teacher Self-Efficacy Scale (Tschannen-Moran & Hoy, 2001). Furthermore, a qualitative follow up to this study would provide a more detailed understanding of the quantitative findings and illumine instructional and personal factors that influence a preservice teachers' self-efficacy beliefs toward teaching in an inclusive classroom.

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Insights Gained from Special Education Pre-Service Teachers Interviewing Paraprofessionals

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Abstract

In this study 25 student teachers receiving endorsement in special education interviewed paraprofessionals and self-rated their ability to perform a variety of paraprofessional supervision tasks. The paraprofessionals expressed desires for increased training and skills in behavior management; increased training in general; communication with special educators; and respect as professionals. The student teachers stated that the interview process helped them set career goals and were helpful in preparing them to supervise paraprofessionals. They rated their ability to supervise paraprofessionals higher after the interviews. The results have implications for teacher preparation programs as the results note that there needs to be coursework that explicitly teaches supervision and management of paraprofessionals and which teaches preservice special educators to be trainers of paraprofessionals, not just teachers of students.

Keywords: Special education, paraprofessionals, preservice, teacher education

Insights Gained from Special Education Pre-Service Teachers Interviewing Paraprofessionals

Paraprofessionals are an important component of education, but tend to have ill-defined roles, poor or nonexistent supervision, and may be over-relied upon to work with students with disabilities, even as their numbers rise (Giangreco, 2013). Paraprofessionals, once considered primarily clerical workers, are now called upon to do many jobs in the classroom, including but not limited to one-to-one, large group, and small group instruction, instructional planning, and behavior management (French, 1998; Keller, Bucholz, & Brady, 2007; Sharma & Salend, 2016). They can, in fact, be the primary means of accommodation and inclusion for students with more severe disabilities (Soukup, Wehmeyer, Bashinski, & Bovaird, 2007).

Beginning teachers may be called upon to provide paraprofessionals with opportunities for professional development as well as supervision and support (Appl, 2006). This may or may not happen. A study in Maine found that while 60.5% of special education paraprofessionals interacted with their supervising teachers on a weekly basis for purposes of student instruction, 15.9% never had any consultation in the area of student instruction (Breton, 2010). It is important that teachers work with paraprofessionals; "the role of the teacher as the leader of ongoing and daily professional development for paraprofessionals is one that is critical to the field" (Stockall, 2014). When teachers do take the time to train and coach paraprofessionals on techniques, the training can be effective and lead to improved student outcomes (Carnahan, Williamson, Clarke, & Sorensen, 2009; Brock & Carter, 2016; Giangreco, Suter, & Doyle, 2010). Some components of teachers working effectively with paraprofessionals include building

a shared philosophy, communicating effectively, training for specific tasks, having regularly scheduled meetings to encourage collaboration, and conducting ongoing performance assessments (Carnahan et al, 2009; Maggin, Wehby, Moore-Partin, Robertson, & Oliver, 2009). Including paraprofessionals on the instructional team and supporting them is linked to lowered paraprofessional turnover (Ghere & York-Barr, 2007).

Despite this, special educators receive almost no training on working with and supervising paraprofessionals (French, 2001; Giangreco et al, 2010; Wallace, Shin, Bartholomay, & Stahl, 2001). There have been calls for college programs to provide instruction on this aspect of the career (Appl, 2006, Wallace et al, 2001; Steckelberg, Vasa, Kemp, Arthaud, Asselin, Swain, & Fennick, 2007).

Student teaching for special education is linked to positive outcomes; special education teachers with longer and more rigorous student teaching experiences are more likely to remain in the field (Connelly & Graham, 2009). However, in student teaching for special educators, where students acquire their hands-on skills for their chosen profession, less than 2% of institutions require that students work with a paraprofessional and some programs do not even discuss this aspect of the career (Conderman, Morin, & Stephens, 2005; Douglas, Chapin, & Nolan, 2016). Therefore, this study sought to gauge the effectiveness of a student teaching practice that would increase students' knowledge of the roles that paraprofessionals play in education, in this case interviewing paraprofessionals about their roles, training, and supervision. Interviews are a valuable aspect of qualitative research that enables the discovery of feelings and interpretations of experiences and past events (Merriam, 2009). This study attempted to 1) incorporate an understanding of the roles and perspectives of paraprofessionals into a special education student teaching experience, 2) collect data on the perspectives of paraprofessionals, and 3) gauge the effect of interaction with paraprofessionals on the perspectives of special education student teachers.

Method

Recruitment and Procedures

The study was vetted and approved by an institutional review board and student participants were trained in use of the consent procedures and interview protocol. The student teachers were recruited for participation from the small public Northeast college where they were completing their degrees. The students were enrolled in coursework and were assigned to complete the interviews as part of their program, but participation in this study was on a voluntary basis. Students who agreed to participate consented to the use of their reflections on the procedure for the study. The student teachers were trained on interview techniques, research ethics, and transcription processes and provided with the interview protocol. The students arranged an interview with a paraprofessional, whom also had the option to consent to have their interview used in this study. (If a student consented to be a part of the study but a paraprofessional did not, the data was not used.) Student teachers conducted, recorded, and transcribed their interviews and reflected in writing on what they learned from the experience. Student teachers also rated themselves both before and after conducting the interviews on their preparedness to work with paraprofessionals on a variety of areas.

Interview protocol
The protocol (see Table 1) was created in collaboration with the first group of student participants. Using a body of research on special education and paraprofessionals (Giangreco, 2013; Giangreco et al 2004; Giangreco 2005; French, 2001) the students and the lead researcher composed questions which would help them understand the experiences of paraprofessionals and improve their supervision abilities.

Table 1
Interview Protocol

1. Tell me about a typical day for you. (What sort of tasks, instruction, etc. do you do?)
2. Describe the training that you've had.
3. What training do you wish you had?
4. What areas of your job do you feel particularly strong in? Why?
5. What areas of your job do you struggle with? Why?
6. How comfortable are you with special education laws?
7. What support do you need for effective behavior management?
8. Who is your direct supervisor? Describe their supervision. (How often do you meet with them? How often would you like to meet with them? Are their expectations clear? Are they consistent? Are they readily available? Do you feel supported?)
9. How would you like to be supervised, supported, or collaborated with?
10. Do you plan your own lessons? Are you confident in delivering academic support or instruction?
11. Is it ever confusing to figure out your role in the general education classroom? Why?
12. What do you enjoy least about your work? Most?
13. What would you want a special educator to know about supervising paraprofessionals?

Participants
25 student teachers and 25 paraprofessionals participated in the study. All 25 student teachers were completing their semester-long student teaching experience and were being licensed to teach and endorsed in both elementary and special education. All 25 student teachers consented to the use of their pre/post data, and 21 consented to the use of their reflections. With the exception of ethnicity, the paraprofessional participants had a variety of backgrounds, as provided in Table 2. (Note: one participant chose to not disclose demographic information).

Table 2
Paraprofessional Demographic Information

		Number of Paraprofessionals (N=25)
Gender	Male	2 (8%)
	Female	22 (85%)
Years in Current Position	Less than Five	11 (48%)
	Five Years or More	13 (52%)
Age	20-30	7 (28%)

	31-40	3 (12%)
	41-50	5 (20%)
	51-60	8 (32%)
	61-70	1 (4%)
Highest Level of Education	High School	3 (12%)
	Some College	4 (16%)
	Associate's	2 (8%)
	Bachelor's	13 (52%)
	Master's	2 (8%)
Ethnicity	White	24 (96%)

Data analysis

The transcribed data was subjected to qualitative analysis using the procedure described by Merriam (2009), in which the data is read and coded and categories and themes are created. Representative quotes were compiled to illuminate the themes. First the paraprofessional interview data was analyzed, then the student reflection data. The quantitative student self-evaluation data was also compiled and analyzed for any changes before and after the interviews were conducted.

Results

Interviews

The paraprofessional participants repeatedly turned to four themes during their interviews: behavior management, training, respect and support, and communication.

Behavior Management

While there were four participants who cited behavior management as a strength, the majority of the responses which referenced behavior management were negative. Seven participants listed it as the weakest aspect of their performance, and the need for behavior training and supervision was repeated throughout the interviews. "I think it is challenging and I also think that we have not had enough training" was one comment which echoed this theme. Eleven participants listed behavior as an area in which they would like more training. "I would like more [training] on emotional and behavioral needs. We see so much in that area because there's so much poverty," said one, with another stating "The training I wish I had would be on behaviors. If anything, I would want more training on how to deal with behaviors and how to motivate kids."

Training

Aside from specific responses about behavior management training, the need and desire for more training overall was a theme that ran throughout the interview responses. "Training? What training?" was the response of one participant when asked what training she had received. Eight of the participants stated that they had received no specific training during their time as paraprofessionals. Others answered this question by discussing other experiences – parenthood, college, career experience – but not actual job-based training. The desire for behavior management training as noted above was accompanied by a call for more training in general, which participants believed would improve their job performance. "We need more training too. It's hard to be thrown into a position and not understand the ways to deal with something," said one participant. Another stated "Without any training, I lost time trying to figure things out. If I

had more training, I feel I would have been able to do more academics and would have been a bigger help to my student sooner. Trying to do it alone was hard." This was echoed by a participant who stated "We enjoy learning about new topics related to special education. If we are going to be working with students with intensive academic needs, there needs to be some kind of training that we receive in order to continue our own learning to help benefit the students."

Respect

The need to be respected and supported by special education teachers and other supervisors was a consistent theme throughout the interviews. Fifteen of the participants gave responses in this theme when asked what they would like a special educator to know about supervising paraprofessionals. The paraprofessional participants repeatedly noted feelings of disrespect and a lack of appreciation. "I feel sometimes like I don't have a brain… they have to decide that we don't want people who are educated and treat them one way, or we want people that are educated and we treat them equally." "Sometimes I feel like the teachers don't believe that paras know much about anything and our opinions are not taken seriously." "I struggle with how sometimes being perceived as 'just the para' and that my voice and the voice for my student or students is not heard. That equal relationship among adults is something that I struggle with." "I'll be getting my Master's so it's not like we came in off the street in PJs and don't know what we are doing." At the same time, a common response was a desire to have that respect and appreciation, summed up by one participant who noted "I think that an assistant or paraprofessional or anybody would want to feel as if they are valued and part of a team. I think it's nice to feel appreciated."

Communication

The final theme to come out of the interviews was the importance of communication. Thirteen participants noted this theme when asked how they would like to be supervised, and six noted it as what they would want a special educator to know about supervising paraprofessionals. The paraprofessionals wanted their supervisors to meet with them regularly, to pass along important information, and to receive job feedback. "It's always important to be honest and to make sure to communicate clearly;" "I would like to meet with [special educators] more often and have more check-ins. Sometimes the expectations aren't as clear as they need to be;" "I would love to meet at least once a week to discuss academic and behavior issues" were some comments which showed the participants' desire for frequent communication. Participants wanted to be invited to Team meetings in order to communicate their perspective. "I would like to have more of a voice for my students at their meetings but we are not invited," noted a participant.

Reflections and Ratings

The student teacher interviewers also had themes develop in their reflections on the experience of conducting the interviews. These themes were goals and the helpfulness of conducting the interview.

Goals

The student teachers felt that they took away practical goals for themselves as far as being paraprofessional supervisors themselves. These goals echoed the above themes, as the student teachers wanted to be sure that they respected and communicated with paraprofessionals and

provided them with training. “It seems clear to me that the two most important things when it comes to supervising paraprofessionals is that they appreciate meaningful trainings that they can apply to their daily tasks as well as clear communication” said one student teacher. “I also know what I should do if I become a special educator to help support my paras. I will make sure that I talk with them and help them when needed.” One summed up their take-aways as “four words for me to remember are communication, collaboration, equality and respect.”

Helpfulness

The reflections were overwhelmingly positive on the experience of conducting the interviews. The student teachers felt that this was a valuable task that improved their preparedness. “I can say that I gained new knowledge about paraeducators and their roles,” said one. “Knowing that I have a job in the fall as a special educator I felt as if she was talking directly to me, preparing me to be the best case manager possible” said another. “Overall, this experience opened up my eyes to a new viewpoint on paraeducators… It has become an experience that will stick with me throughout the entirety of my teaching career.”

Rating data

While the student teachers wrote in their reflections that they found the interviews impactful, this was only borne out in a modest way by their pre- and post- self-rating on their readiness to supervise paraprofessionals. (Note: In cases participants indicated a score in between two rankings, the scores were considered to be the higher of the two rankings for both pre and post data.)

Table 3

Student Pre-Interview and Post-Interview Preparedness Rankings

	Not Prepared		Somewhat Prepared		Prepared		Very Prepared	
	PRE	POST	PRE	POST	PRE	POST	PRE	POST
Supervising Paraprofessionals			18	3	6	16	1	6
Academic Instruction			7		16	12	2	13
Collaboration			2		14	8	9	17
Behavior Management			12	2	13	18		5
Academic Planning	1		7	1	16	16	1	8

Table 4

Student Score Averages Pre-Interview and Post-Interview

	Average Pre Score	Average Post Score	Difference
Supervising Paraprofessionals	1.2	2.12	+.82
Academic Instruction	1.8	2.52	+.72

Collaboration	2.2	2.68	+.48
Behavior Management	1.5	2.12	+.62
Academic Planning	1.68	2.28	+.60
Overall	1.70	2.34	+.64

When converting the rankings to a numerical 0-4 scale, overall the average self-ranking of the student participants rose by .64 points. In each category there was a positive differential, indicating that there was at least some growth in self-perception of the ability to perform these tasks with paraprofessionals. However, though the interviews described the interview experience as being transformative, the ratings still show most students as being 'prepared' rather than 'very prepared,' showing that the growth may have been more in awareness than in practicable skills.

Discussion

Limitations

This study was conducted with a very specific cohort of participants who were not randomly selected. It focused on student teachers and paraprofessionals in one specific Northeastern state. Their experiences may not be comparable to those in other areas of the nation. This study also took place over the same period of time where the student participants were taking education classes and student teaching, meaning that the increased post self-assessment scores may have come from gains in experience or from concurrent coursework rather than directly from the interviews.

Implications for Teacher Preparation

These results have several implications for teacher preparation programs including a) the need for explicit coursework on supervision and management of paraprofessionals and b) the need for teachers to be prepared as trainers and knowledge distributors in their schools.

Coursework on Supervision of Paraprofessionals

The student participants in this study clearly stated that they felt unprepared to supervise paraprofessionals prior to participation in the study. After participation in this study and the completion of concurrent coursework, they felt more prepared, but perhaps not enough to be truly effective supervisors at the beginning of their careers. It has been noted repeatedly in the research that teacher preparation for special education is consistently lacking in training on working with and supervising paraprofessionals (French, 2001; Giangreco et al, 2010; Wallace et al, 2001). The paraprofessional participants in this study returned to themes of things that they wanted and found lacking in their supervising teachers: communication and respect. Special educators in particular are so overwhelmed with their workloads that turnover in the profession is high (Brownell, 2005). Special educators cannot become so overwhelmed by their other responsibilities that they neglect the basic supervision and communication with the paraprofessionals who work with the students on their caseloads. Teacher preparation programs must heed the call to include training in working with paraprofessionals (Appl, 2006, Wallace et al, 2001; Biggs, Gilson, & Carter, 2019; Steckelberg et al, 2007) in order to rectify this gap. Changes in teacher expectations have led to an expectation that special educators will need leadership skills, and explicit instruction in collaboration and communication skills (Smith,

Robb, West, & Tyler, 2010). Special education teacher preparation programs need to include direct instruction in these collaboration skills and their application to paraprofessionals, and the student teaching experience is a particularly apt time for students to practice these skills in a real-life situation.

Teachers as Trainers

The paraprofessionals in this study repeatedly stated their desire for more training. They wanted the knowledge necessary to improve their practice and the outcomes for their students, especially in the area of behavior management. The literature has shown that, while district or school-wide training may be important, the teacher may need to be the primary provider of training for paraeducators (Appl, 2006; Stockall, 2014). While special educators may be primarily focused on the students on their caseload, they can't forget that teaching paraprofessionals can have a trickle-down effect which can lead to improved student outcomes (Carnahan, Williamson, Clarke, & Sorensen, 2009; Brock & Carter, 2016; Giangreco, Suter, & Doyle, 2010). Teachers need to be open to passing on what they have learned in their college and professional development programs (specifically in the area of behavior management) to the paraprofessionals whom they supervise in order to fulfill multiple objectives: having a satisfied paraprofessional staff who feel respected and confident; increasing the ultimate state of student outcomes; and having a stronger overall behavior management standard in the classroom and school.

Summary

The voices of paraprofessionals tell a clear story: the need to be treated as professional educators, who need respect and support to do their work to the highest standard. The student teachers who interviewed the paraprofessionals found the experience to be impactful in their awareness and ability to supervise paraprofessionals in such a professional manner. Teacher preparation programs need to incorporate coursework and experiences to make sure that all special educators can enter the profession ready and able to complete this important work.

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Experiences of Special Educators in Creating Opportunities for Students to Practice Self-Determination

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Abstract

Self-determination skills are a potential predictor of post-school success for individuals with disabilities. This study examined the perspectives of special educators of students in preschool through age 22 in one school district who participated in multiple professional development and coaching sessions on self-determination including the Self-Determined Learning Model of Instruction (SDLMI) and student involvement in the IEP process over a two-year period. Data were collected through interviews with eight special educators. Four major themes emerged from the data: personal knowledge of self-determination, educator perspectives on their roles in creating opportunities, strategies for developing self-determination, and parent involvement. Findings suggest that a primary perceived challenge in creating opportunities for students is a misalignment between teacher and parent understanding of self-determination and related goals. Implications for practice and future research are discussed.

Keywords: disability, self-determination, self-determined learning, self-directed learning, post-school outcomes, professional development

Experiences of Special Education Practitioners in Creating Opportunities for Students to Practice Self-Determination

Self-determination skills are vital for the social and academic success of students with disabilities (Mazzotti et al., 2016). In the *1990 Individuals with Disabilities Education Act (IDEA)* section on transition services, self-determination was acknowledged as "the ultimate goal of education" (Halloran, 1993, p. 214). Shogren et al. (2015) defined this ultimate outcome, self-determination, as a:

> *Dispositional characteristic manifested as acting as the causal agent in one's life. Self-determined people (i.e., causal agents) act in service to freely chosen goals. Self-determined actions function to enable a person to be the causal agent in his or her life. (p. 258)*

At the heart of self-determination is a student's ability to make choices to work toward goals. Specifically, self-determination includes the following components: choice making, decision making, problem solving, goal setting, goal attainment, self-monitoring, self-advocacy, internal locus of control, self-awareness and self-knowledge (Wehmeyer, 1995). Wehmeyer (1995) explains that empowerment and self-determination can be used interchangeably and specifically defines it as, "an internal need contributing to an individual's performance of intrinsically motivated behaviors" (p.18). While there are myriad opportunities for children to practice self-determination every day from choosing their clothing to reflecting on why they earned a particular test score and how they might improve in the future, we must consider if the adults in a child's life are making choices for the child, or if the child is the one making choices.

While evidence exists to support the teaching of self-determination skills (Test, Fowler, Kohler, & Kortering, 2010), students also require relevant and authentic opportunities to generalize self-determination skills to real-world contexts and situations (Wehmeyer & Field, 2007). One strategy for accomplishing this involves providing opportunities for students to actively participate in their own IEP meetings. Actively participating during the IEP process allows students to self-advocate for services and supports needed to be successful in the school setting, as well as develop and analyze progress towards annual and postsecondary transition goals customized to their interests and plans for life after high school (Royer, 2017; Seong, Wehmeyer, Palmer, & Little, 2015). Other strategies include embedding self-determination skill instruction and practice opportunities within academic tasks and social situations in inclusive classroom settings (Miller, 2012; Wehmeyer & Abery, 2013), as well as outside of the classroom through vocational exploration and community-based instruction (Papay, Unger, Williams-Diehm, & Mitchell, 2015; Test, Bartholomew, & Bethune, 2015).

Research has shown that self-determination skills contribute to positive adult outcomes (Test, Fowler, Kohler, & Kortering, 2010; Test et al., 2009) and are a potential predictor of post-school success for individuals with disabilities (Mazzotti et al., 2016). In a survey of 891 general education and special education teachers in elementary and middle schools, Stang, Carter, Lane, and Pierson (2009) found that the participants perceived that self-determination is important for students with special education teachers rating the importance higher than general education teachers. They also reported that middle school teachers were more frequently providing self-determination instruction than elementary school teachers, demonstrating a need for promoting self-determination in younger grades. For the education of students with exceptionalities to be recognized within the framework of self-determination, educators must be knowledgeable of the construct and prepared to create opportunities for their students to develop and practice self-determination skills. However, special educators' understanding of self-determination components and their implementation of strategies to address students' acquisition of all aspects of self-determination varies (Carter, Owens, Trainor, Sun, & Swedeen, 2009; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000b). How can a child become self-determined if there are few opportunities to develop the skills? Creating a shift in the adults' perspectives of student empowerment is crucial.

The Self-Determined Learning Model of Instruction (SDLMI) (Wehmeyer et al., 2000b) provides a guide for educators to create opportunities for students to develop self-determination and has demonstrated efficacy in increasing access to the general education curriculum for students with

disabilities (Lee, Wehmeyer, Palmer, Soukup, & Little, 2008; Lee, Wehmeyer, Soukup, & Palmer, 2010; Shogren, Palmer, Wehmeyer, Williams-Diehm, & Little, 2012). Although the SDLMI has a strong research base to support its efficacy, most studies have examined student outcomes rather than the experiences of educators in implementing the SDLMI with their students. Preliminary studies of educators' experiences show that utilizing the SDLMI affects educator perspectives of students' abilities and potential in self-determined actions (Shogren, Plotner, Palmer, Wehmeyer, & Paek, 2014). The need for professional development is underscored by a national survey of 1,219 special education practitioners' promotion of self-determination, which found that 60% of respondents were acquainted with self-determination (Wehmeyer, Agran, & Hughes, 2000a). Although more recent studies (e.g., Carter et al., 2009) have shown that the familiarity with self-determination has increased, Cho, Wehmeyer, and Kingston (2011) identified the lack of formal training in self-determination interventions, such as the SDLMI, is one of the most significant hindrances special educators face in creating opportunities for students to develop self-determination skills.

Despite the extensive research on self-determination and the use of the SDLMI, no researchers have examined how educators are supported in their implementation of the SDLMI. Using the SDLMI, along with face-to-face and virtual professional development sessions, this study addressed a critical need in the field of transition of students with exceptionalities: educator professional development. Although the SDLMI has positive impacts on student transition including change in self-determination and academic achievement (Lee, Wehmeyer, & Shogren, 2015), scant evidence exists on the successful training of educators in the SDLMI.

This study examined how preschool through transition-age special educators identified, rethought, and reworked their everyday practices through the lenses of self-determination and created opportunities for students to develop and practice self-determination skills. We explored the experience of modifying educator practices to create opportunities reported to effectively enhance self-determination skills of students with variety of disabilities, grade levels, and educational environments. As self-determination skills must be explicitly taught (Wehmeyer & Field, 2007), opportunities for students encompassed educator directed instruction on self-determination related content, specifically goal attainment, through the implementation of the SDLMI. Through discussion during professional development sessions and grade level team meetings, educators were able to use specific examples from fellow practitioners to evaluate their own practices and develop additional ideas to provide opportunities for their students to grow self-determination skills. This qualitative study utilized interviews to understand the experiences of these special educators in applying knowledge gleaned during professional development and coaching sessions focused on self-determination. The purpose of this study was to explore the following question: *How do special educators create opportunities for their students to develop and practice self-determination skills?*

Method

Procedure

Participants completed nine professional development sessions focused on self-determination, the SDLMI, and student-led IEPs over the course of a school year, from here on referred to as Year 1. Educators infused self-determination strategies into their daily practice throughout Year

1 and began piloting the SDLMI and awareness of the SDLMI process with one to two students receiving special education services midway through Year 1. In the following school year, from here on referred to as Year 2, the participants expanded implementation of the SDLMI to all students on their caseloads. After a presentation on the Student-Led IEP process by McGahee, Mason, Wallace, & Jones (2001), participants had students use their work with the SDLMI, and knowledge of their goals and progress toward their goals as a bridge to involvement in their own IEP meetings. In Year 2, participants trained other district special educators, those at similar grade levels, in the SDLMI who then used it with one or two students. Eight educators, who implemented self-determination instruction in Year 1, participated in interviews about their experiences with implementation of the SDLMI and the creation of opportunities to promote self-determination. The setting, participants, professional development and coaching sessions, and data collection and analysis are described below.

Setting

Professional development sessions occurred at a location central to the school district. Some sessions were led face-to-face and some sessions were facilitated virtually using a video conferencing platform. Three professionals in the field of self-determination presented the professional development and coaching. The majority of sessions were presented by two of the professionals, also researchers on this study. One face-to-face and one virtual session were led by only one professional who was present at all sessions. Participants were from a school district in a mid-sized suburban town consisting of over 80% White individuals and a median family income of $68,000 (U.S. Census Bureau Quick Facts, 2015). The district's long-term goal is to implement the SDLMI in classrooms, including students without disabilities.

Participants

Twenty special educators of students in preschool through age 22, in one school district, participated in nine self-determination related professional development sessions over a period of two school years. The practitioners taught in a variety of settings with students with disabilities including self-contained classrooms, community-based instruction, and inclusion in general education settings (co-teaching, push-in, and pull-out). The focus of this study is solely on data gleaned from semi-structured interviews with eight of the twenty practitioners.

The district Assistant Superintendent for Student Services selected one to two educators from each school in the district for a total of 20 participants in the initial implementation of self-determination instruction, training on SDLMI and Student-Led IEPs, and additional professional development and coaching sessions. Each of these educators had a minimum of four years of teaching experience in their current setting. This selected group, referred to as the Initial Implementation Group, piloted the SDLMI with one to two students on their caseload following training in Session 3. After the completion of Session 5, the selected group of educators were invited to participate in this study through an email sent by the district Assistant Superintendent of Student Services. Educators were offered an incentive of entry into a drawing to win a $50 Amazon gift card, with additional entries possible for additional tasks including member checking and follow-up demographic questions.

Six educators completed a semi-structured (Merriam & Tisdell, 2015) phone interview with one of the researchers. As data saturation had not been reached with the initial six interviews,

members of the Initial Implementation Group who had not yet participated in an interview were invited again to participate in the study after Session 8. Two additional special educators provided consent to participate in the study and were interviewed by one of the researchers. After analyzing interviews with eight participants, the data were saturated.

The eight participants in this study were all special educators; three taught at the elementary level, three taught middle school, one taught preschool, and one taught in a post-secondary setting (ages 18-22). The participants had 4-41 years of experience teaching (*mean* = 16.9) and 4-12 (*mean* = 6.25) of those years at their particular special education settings. Six participants taught in a *Learning Center* using pull-out instruction in small groups. Four participants also co-taught some classes in the general education setting, paired with a general education teacher. One participant taught in an inclusive setting with a mix of students with and without disabilities. One participant taught in a self-contained setting with students in a transition program. One participant additionally led instruction in small groups to support Multi-Tiered Systems of Support (MTSS) interventions. The number of participants was limited due to the possible participant pool of 20 expert educators who completed extensive training on self-determination and the SDLMI professional development.

Professional Development Sessions

Participants attended a series of professional development sessions during Year 1 and Year 2 (see Table 1 for summary of educator professional development). Sessions were provided by national experts in the area of self-determination. Along with instruction in self-determination, the SDLMI, and student-led IEPs sessions included collaboration with colleagues to discuss goals and instructional ideas. After the professional development sessions, participants were challenged to identify, rethink, and rework their everyday practices through the lenses of self-determination to create opportunities for students to develop and practice self-determination.

All eight practitioners participated in the nine sessions outlined, with the exception of two participants who missed two sessions each in due to health and family emergencies. Approximately 10 administrators also participated in some professional development sessions. Although they did not participate in the study, their participation is notable because administrator support is the first step outlined in the Student-Led IEPs (McGahee et al., 2001). Three of the 20 professionals who participated in all nine sessions led their own professional development sessions near the end of Year 1 with all special education practitioners in the district. Two of those session leaders were participants in this study.

Table 1
Summary of Educator Professional Development Sessions

Session	Delivery	Participants	Length	Content
1	Face-to-Face	All Special Education Teachers Grouped by Preschool/Elementary, Middle, or High School/Transition	2 hours per Level	Self-determination 101 and Student-Led IEPs

2	Face-to-Face	District Symposium Open to All Educators, Three Sessions	1 hour	Self-determination 101 and Student-Led IEPs
3	Distance	Initial Special Education Implementation Group	3 hours	Implementation of the Self-Determined Learning Model of Instruction (SDLMI)
4	Distance	Initial Special Education Implementation Group	3 hours	Follow-up on SDLMI Implementation, Progress Towards Goals, Planning, and Discussion of Evaluation
5	Face-to-Face	Initial Special Education Implementation Group	30 min. to 1 hour (individual), 3 hours (whole group)	Individual Observation and Coaching, Whole Group Feedback and Evaluation of SDLMI Implementation and Planning for Year 2 Implementation
6	Distance	Initial Special Education Implementation Group by Preschool/Elementary, Middle, or High School/Transition	2 hours Preschool/ Elementary and Middle, 1 hour High School/ Transition	Self-determination Implementation and Evaluation Plans for the New School Year
7	Face-to-Face	District Symposium Open to All Educators, Three Sessions (One reserved for The Initial Implementation Group)	1 hour	Self-Determination Foundation and Resources (All Educators), Student-Led IEP (Initial Implementation Group
8	Distance	Initial Implementation Group	3 hours	Planning, Implementation of Student-Led IEP, Evaluation Tools
9	Face-to-Face	Initial Implementation Group	30 min. to 1 hour (Individual), 3 hours (Whole	Individual Observation and Coaching, Whole Group Feedback and Evaluation of SDLMI

	Group)	Implementation and Planning for Year 3 Implementation and Evaluation

Note: Year 1 encompassed Sessions 1-5 and Year 2 included Sessions 6-9. Administrators received one hour of Self-Determination 101 professional development and parents were invited, through the district special education advisory committee, to attend a two-hour workshop on self-determination and families at Session 5. Parents of children with and without IEPs were invited to attend a similar two-hour workshop at Session 9.

Data Collection and Analysis

Semi-structured interviews (Merriam & Tisdell, 2015) were used to determine how educators applied concepts from the professional development sessions to create an educational environment rich with opportunities for students to develop and practice self-determination skills. Six interviews, ranging 20-35 minutes were completed after Session 5. Two interviews were completed after Session 8. Interview questions were designed to address the research question, including such questions as, "*In creating opportunities for students to practice self-determination skills, what have been some challenges you've experienced? Successes?*"

Interviews were audio-recorded then transcribed. Interview responses were then coded using Nvivo for Mac version 11.4.2 to determine themes. Two researchers used open and axial coding to independently examine each meaning unit (phrase, sentence or paragraph) then group meaning units into themes (Merriam & Tisdell, 2015). Themes were then examined for relationships between the themes. Each researcher compared transcripts to determine consistency across participants and examine for discrepant data. Each code, category, theme, and quotation was discussed between the two raters with any disagreements discussed until mutual agreement occurred. Themes were generated using deductive analysis to test Causal Agency Theory (Shogren et al., 2015) and implementation science (Fixsen, Blase, Metz, & Van Dyke, 2013; Fixsen, Naoom, Blase, & Friedman, 2005). Themes that lacked sufficient support were discarded.

Trustworthiness

Participants were purposefully identified to represent of the population of special education practitioners who participated in the professional development and coaching. Researchers recruited participants until interview data reached saturation and no new themes emerged. Interview questions were designed to explore the research questions without leading the participant to a specific response. Interviews were recorded and transcribed using a professional transcribing service. Transcripts were then reviewed for validity by the researchers and through member checking. Trustworthiness was addressed through a variety of methods (Creswell, 2013) including interrater reliability in coding to increase the reliability of the themes. Validity was addressed through member checking, peer debriefing, and reflexivity. A peer check was used at each phase of the study from proposal to manuscript.

Findings

Through the process of coding, four broad themes of educator perspectives emerged: (a) personal knowledge of self-determination, (b) educator perspectives on their roles in creating opportunities, (c) strategies for developing student self-determination, and (d) parent involvement. The theme with the preponderance of the data was strategies, which included several categories that aligned with the components of self-determination. The themes shed light on how special educators create opportunities for their students to develop and practice self-determination skills and supported the theoretical framework of implementation science (Fixsen et al., 2013; Fixsen et al., 2005) and Causal Agency Theory (Shogren et al., 2015).

Personal Knowledge of Self-Determination

I'm already doing it. Self-awareness was an initial and primary skill that educators identified as necessary for students to develop self-determination skills. While this is an instructional strategy and will later be discussed under the theme of Strategies for Developing Self-Determination, it parallels the process educators experienced through expanding their awareness of self-determination within the context of their own teaching. All eight participants explained that when they learned about self-determination, they realized that although they may not have previously called it *self-determination*, they were already exhibiting practices of creating opportunities for students to practice self-determination. Some participants explained the change in perception of their teaching practices, which was highlighted by one participant, "It isn't an add-on to what we're doing. It's what we already do. It's just a shift in our perspective." While one participant said she already used most of the strategies discussed in the self-determination professional development sessions, other participants described how the increased awareness influenced their teaching practices, "It can be tied right into what you're doing already…very simple changes in your instruction like adding a graphing component where they can set a goal and watch their progress." Although educators were already creating some opportunities for their students to practice self-determination, understanding how to explicitly teach self-determination through the SDLMI increased the fidelity of implementation as another participant explained, "Now that I've had the training with [Authors], and [they've] put more structure around it, it makes it clearer how to implement it."

Definition of self-determination. Teachers were asked to define self-determination to take a pulse on their understanding and interpretation of self-determination. Although the definitions varied, all participants connected the definition to their own teaching practices to better internalize it and included a component of developing self-awareness in students. One educator described it as, "metacognition…understanding how you learn." Another educator defined it as, "figuring out how one can be successful; learning their strengths and weaknesses." Other participants conceptualized it more broadly in terms of the goals of self-determination, "students have opportunities to really grow towards independence and be able to live a life independent of the support that we provide them currently."

Other components of definitions included setting goals, planning, self-advocating, solving problems, and reflection. These descriptors mirror the SDLMI steps, (i.e., Set a Goal, Take

Action, Adjust Plan or Goal), as well as the components of self-determination (Wehmeyer, 1995). Some participants described it takes patience, similar to growth mindset (Dweck, 2016),

> *It's just an opportunity for growth and learning rather than it being an obstacle of just halting your efforts that you have to sort of fall and scrape your knee and learn how to get back up in order to keep going.*

Another educator further described self-determination, "You're never going to be able to sit there and go, all right, my kids are as self-determined as they can be…I like the way of looking at it as a process much more than an end result."

Prioritizing self-determination. All participants discussed the significance of self-determination and the need to make it a priority. One educator explained it in terms of a daily practice, "It's sort of growing what the expectation should be." Another educator described a shift in her thinking, "It just took a while for me to sort of wrap my head around bringing it to the forefront, which is something that I'm now doing…now I make it the most important thing." Other educators discussed that developing self-determination has become a priority of the district. One educator explained that after an outside transition specialist visited their district, who "lit [her] fire," she decided to enter a master's program in transition leadership. She is currently taking a course called, *Youth Development and Self-Determination* so she explained, "my whole world has turned into self-determination and making sure my students have opportunities." Overall, it was clear that all participants believe in the power of developing self-determination in students, "If we don't teach them these skills to become more independent, we're really limiting the ability they have to live a full life."

Educator Perspectives on Their Roles in Creating Opportunities

Enthusiasm for self-determination was apparent. Two of the participants joined one other educator who attended the professional development sessions to lead self-determination training for other special education professionals in the district. One educator explained, "We found some cool resources online like some videos to get everybody a little motivated by it." With the demands placed on educators, buy-in is crucial for successful implementation.

Three educators discussed their role in setting expectations for the students and shifting responsibility to the student. One educator said that although students are reluctant to contact their teachers, she provides scaffolding for her students to lead this communication and develop self-advocacy skills. Another educator discussed her strategy of shifting the responsibility of encouragement to the students by providing reminders in the classroom,

> *When somebody's saying, 'Oh my God. I can't do this. This is too hard.' We stop what we're doing, we go up to the board, we figure out what they need to say and then we talk about [it]. Sometimes they may just re-say it like, 'It's not that this is too hard, it may just take some time and effort.*

Rather than the educator encouraging students herself, she is building positive self-talk skills in students to lead their own self-reflection and perseverance.

An educator discussed another form of shifting responsibility, her students' involvement in the IEP process. One educator explained that when she prompted her student to make choices, his response was to ask what the educator wanted. Due to the supports and specialists needed in special education, it can be easy for adults to take the lead and for students to expect that dynamic. Although only two educators directly discussed self-determination opportunities in terms of shifting responsibility, all strategies are rooted in the student taking ownership.

Strategies for Developing Self-Determination

Building self-awareness. The primary category that emerged within strategies was the idea of building self-awareness in students. One participant explained the challenge of building self-awareness in students because, "they are not necessarily accurate in their reflection." When an inaccurate reflection is observed, one educator explained that is an important time to help them guide their reflection.

Self-monitoring allows students to draw conclusions based on data. If students were asked generally about their progress with a particular skill, the responses may diverge from the reality of the skills. However, several educators discussed the strategy of guiding students in monitoring their own progress by charting, keeping a graph, or highlighting to "visually observe progress." By making concepts more tangible, students are able to draw their own connections based on data, rather than emotion or speculation. One educator discussed how she loved the example of *The Little Engine That Could* from professional development sessions to explain self-determination. Using concrete examples to build self-awareness also connects to goal setting and progress monitoring, as students can be guided through creating small goals to take steps toward larger goals. One educator explained, "Make it as concrete as possible. It's much easier for them to measure if they did it or not." Another educator recognized, "It's not always that tangible and a lot of times just that everyday subtle change in their thought process is one of the most important successes."

Reflection was also identified by all participants as an important component of building self-awareness. An educator explained that she moved "reflection to the forefront" by adding self-reflection as part of the students' "ticket out of the Learning Center." Teachers can guide students in setting a goal, thinking about the steps to get there, then reflecting on that process. One educator talked about guiding questions such as, "What was easy about this one task?" or "Why didn't I complete this?" Another educator said that she creates opportunities for developing self-awareness by asking students to examine their mindset after they struggle to stay on task. She asks how they feel when they complete their work, encouraging them to be more efficient with their time. When their work is not completed, she asks them to reflect on why (e.g., anxiety or quantity of work). One of the elementary educators explained that self-awareness is more challenging at the elementary level, so she writes a note home to parents with the students to help them articulate what they did in school. She explained that it aided students with working memory and communication challenges. These are yet further examples of how educators utilized the self-determination professional development.

Choice-making and self-advocacy. The skill of choice-making and self-advocacy were not discussed as much as self-awareness but were identified by educators as skills that could be

developed to put students in the driver's seat. One educator told a story about a student choosing to move to a more challenging class after she asked him if he would like to try it. When the student was drawing and not taking notes, she asked him, "Do you want to stay in this class? Because it's your choice. You don't have to be here if you don't want to." When he replied by asking his educator if she wanted him to go back to the other class, she replied, "I want to know what you want to do." He decided to stay in the challenging class. This educator further explained that students want to be more independent and make their own choices that "they don't want somebody hovering over them and telling them what to do."

In terms of self-advocacy, one educator said that she tells her students they need to remind their general education teachers about their accommodations. She asks them to email the general education teacher to practice the steps they will need after they leave the school setting. Another educator said she has a student, who needs frequent breaks, practice self-advocacy by asking his educator for a break when he needs one. She feels this gives him more control. This educator also discussed how she coaches students to think about self-advocacy during reflection by reminding them about identified needs, "I don't know that unless you come and tell me that." Involvement in the IEP meeting was also discussed as an opportunity to practice self-advocacy skills. An educator said that student involvement "makes you sit back and really look at the whole picture, and kind of see through [the student's] eyes." Three educators said they have incorporated self-determination goals into student IEPs.

Goal setting and attainment. The emphasis on goal setting in the SDLMI was reflected in participant responses. After self-reflection, it was the second most discussed strategy. The discussion of goal setting and attainment was often connected to building self-awareness, self-monitoring, and growth mindset. One educator told a success story about a student who set a goal of getting accepted to a vocational high school, yet her grades were too low. To help the student in the goal setting process the educator guided her in setting many small goals that were tangible and measurable as stepping stones to get to the larger goal. When the student did not reach her initial goals, the educator guided her in reflection and the cyclical goal attainment process of the SDLMI. The student didn't reach her initial goals due to factors out of her control, so could she select goals in which she would have more control? The student was motivated by the goal setting process and ultimately raised her grades and then was accepted to the vocational school. The educator explained, "This was a direct…this was life changing for her."

Another educator explained that more support was needed in goal setting at the elementary level, but that after creating a worksheet that fit her students' communication needs to provide scaffolding, they were successful. Another educator said that she has her students use visual graphing and color coding to grade themselves on how they did for a goal. She also emphasized the importance of not only setting goals but following up on those goals. Another recommendation was to try something small, so the student could go through the process and learn the language and steps of goal setting. Teachers identified goal setting as a key component for creating opportunities for students to develop self-determination, with many strategies to help students set and attain goals.

Strategies at the preschool level. The preschool educator we interviewed discussed how she adapted the strategies to work on self-determination with her students, some of whom were non-

verbal. As scant resources are available for working with students on self-determination at the preschool level, this educator developed her own adaptations through understanding the communication abilities and needs of her students. She explained their focus was on practicing making choices between two options, practicing self-regulation through regulating their bodies in the setting, and self-advocacy through practicing saying, “I don’t like that. Please stop.”

During a visit to her classroom at the end of Year 2, she showed the researchers how she had used visual prompts for choice making and self-awareness development and collaborated with the occupational therapist to work on self-determination with students who are non-verbal. In response to her work with students who can verbalize, she described successes in interviewing students about their strengths and areas for improvement. While educators at the elementary level were utilizing an adapted Likert scale assessment ranging to a smiling to frowning face, the preschool educator explained the assessment was not yet appropriate for some of her students who may not yet fully understand the differences between the faces. However, her simple interview strategy provided opportunities for informal assessment.

Educator Perspectives on Parent Involvement

Although parent involvement is not emphasized in the SDLMI, its importance is discussed in other resources such as the Student-Led IEP. Some educators are parents themselves and told stories about utilizing strategies to develop self-determination in their own children. However, six of the educators discussed parents when asked about challenges in creating opportunities for their students to develop self-determination. As the current study only examined the perspectives of special educators, this finding does not incorporate the parent perspectives.

One challenge discussed by the participants was the perception that parents often wanted their children to have more guidance and structure than the educator thought was necessary. For example, one educator said a parent of a child with autism said to her, "I want you to write assignments for her in her book." The educator replied, "I'm not going to do that. I'm going to teach her how to use it online." She explained,

> *It was really a battle for a while. You know, the mother trying to get us to micro-manage. And the girl doesn't want to be micro-managed either…But, by the end of the school year, the mom was crying because she was so happy to see how far her daughter had come.*

Another educator explained, “a lot of the parents, when they hear the ideas of self-determination, they think of it as a big thing and they don't even necessarily know that their kids are already doing those things, in every day interactions.” Yet another educator said,

> *Families were a little reluctant to kinda let their child spread their wings…A lot of parents foresee themselves taking care of their children forever and don’t really realize they’re limiting them by not allowing them to develop the skills they need to find jobs and work in the community.*

Another educator described her perception of parents as, “helicoptering or snow plowing their kids, moving stuff out of the way so things are easy for them and fixing it for them.” This educator also said that she thought that low expectations played a role, along with the influence

of the parent's anxiety on the student. Although each interview focused on the school setting, it is notable that the majority of participants discussed parents when asked about challenges. Two educators explained their parent responses varied. One educator said, "It's hit or miss…some parents are eager, and some are petrified" while another explained,

> *It's been kind of a range of parents. We have some parents that just aren't willing to accept yet that their child needs additional support. Then we have other parents that are so open to accepting suggestions, and if we say, "Try this at home," they'll try everything in their power to try to get them to do it at home…Then they go home and do it, and then the child finally does it for them. They're just so excited because they haven't seen it.*

Although she demonstrated some challenges with parents that were similar to the experiences of other educators we interviewed, she also provided a window of hope by explaining,

> *You just have to teach [parents] how to do it or break it down smaller. Once they learn how to do that, and they figure out their child can do it, they get so excited. Then they want more and more.*

Supporting the potential outcome of parent involvement, another educator explained a parent reaction, "He said to me, 'I really feel like you understand my daughter and I appreciated that.' So, I'm really excited about that."

Discussion

The intent of this study was to investigate the experience of educators providing opportunities for their students to practice and enhance self-determination skills within practical contexts and situations. Current research emphasizes the importance of providing students with disabilities with self-determination skill instruction, as well as providing students with opportunities to practice these skills to enhance instructional relevance and promote skill generalization (Mazzotti et al., 2016; Wehmeyer & Field, 2007; Shogren et al., 2015). In this study, the participants perceived that professional development sessions on self-determination and the SDLMI impacted their knowledge of self-determination, understanding of their role in creating opportunities for self-determination development, and their ability to implement strategies to increase self-determination skills.

This study identified potential challenges encountered by educators included allocating time for self-determination practice opportunities on a daily basis, perceived differences between self-determination development in school and home settings, and collaborating to prioritize and consistently provide practice opportunities across settings. These challenges necessitate further inquiry into how educators can provide their students with opportunities to practice self-determination skills and make these practice opportunities meaningful for their students.

Educator Professional Development

On a daily basis, special educators are tasked with facilitating academic skill instruction, collecting data and monitoring student progress, writing IEPs and leading IEP meetings, collaborating with colleagues and their students' family members, and performing countless

other duties that inevitably arise over the course of a typical school day. Given the many job responsibilities of special educators, the prospect of adding one more task in the form of self-determination practice opportunities may deter educators from consistently providing these opportunities to their students. Educators within this study shared that, rather than adding to an already busy daily schedule, providing self-determination practice opportunities actually enhanced the instruction they were already providing. In fact, many educators were providing self-determination practice opportunities without even realizing it.

Helping educators understand the meaning of self-determination and how seamlessly self-determination practice opportunities can be integrated into the daily schedule, as well as the manner in which these practice opportunities enrich daily instruction, may help to promote their consistent use in classroom settings. As indicated by the participants in this study, accomplishing this goal could involve professional development sessions that include defining self-determination, as well as guidance on embedding self-determination practice opportunities into daily routines. Self-determination skills such as problem-solving and decision-making are inherent components of academic skill instruction in general. Rather than teaching and providing practice opportunities related to self-determination in isolation, embedding both self-determination skill instruction and practice opportunities within academic instruction can (a) enhance instructional relevance; and (b) allow educators to efficiently teach both sets of skills by addressing them simultaneously (Bartholomew, Test, Cooke, & Cease-Cook, 2015; Konrad & Test, 2007). Self-determination skills such as setting goals, measuring progress toward goal attainment, self-advocacy, and self-awareness can be addressed by involving students to a greater extent within the IEP process (Arndt, Konrad, & Test, 2006; Martin et al., 2006). Opportunities, like student involvement in the IEP process support the development of problem-solving skills and an internal locus of control. Students with an internal locus of control know that they can influence outcomes in their lives, rather than interpreting events as outside of their control.

Collaboration with Parents

Educators and their students' family members share common goals related to student achievement and positive school experiences. Despite these goals, educators within this study consistently share that they perceived their collaboration with parents as a challenge when implementing opportunities for their students to practice self-determination skills. Specifically, the most common perceived concerns educators expressed involved parent hesitance to provide opportunities for their children to be independent and concerns that self-determination skills were not attainable for their children.

When considering collaboration between professionals and families to create opportunities for children to develop self-determination, cultural contexts must be considered. Self-determination is perceived and operationalized differently in some cultures (i.e., Shogren, 2012; Zheng et al., 2015). In a qualitative study of Hispanic mothers' perceptions of self-determination, Shogren (2012) found differences between the mothers' perceived development of self-determination at home and how self-determination was operationalized at school. The differences led to conflicts and the perception of mothers that their cultural values were not considered or respected. In addition to varying perceptions of self-determination, disability is also perceived differently across cultures (Halder & Assaf, 2017). It is unclear if cultural differences affected the perceptions of teachers in this study, but our findings support previous research underscoring the

need to understand perceptions of families in creating opportunities for children to develop self-determination.

While special educators bring a wealth of knowledge and experience to the collaboration table related to education and self-determination, parents are often the most consistent members of their child's support system. Given this unique expertise, it behooves educators to (a) understand the cultural and familial perceptions of self-determination within the families of their students, (b) share the concept of self-determination and its value with parents while maintaining cultural awareness, (c) include parents when identifying and developing opportunities for their students to practice self-determination skills; and (d) empower parents to provide self-determination practice opportunities within the home and community settings. Collaborating with parents could assist them in seeing the practical benefits associated with practicing self-determination skills (Schultz, Able, Sreckovic, & White, 2016).

Professional development Session 6 focused on the Student-Led IEPs (McGahee et al., 2001). During this session, the researchers emphasized the importance of involving parents/guardians before they begin working with the student on leading their own IEP. Although educators attended nine professional development sessions, most parents did not receive training on self-determination. A group of 20-25 parents/guardians, primarily of students receiving special education services, attended a workshop on self-determination and families offered at the time of Session 5 and a group of approximately 30 parents/guardians attended a similar workshop at Session 9.

While educators can attend professional development as part of their contracted hours, attending a workshop is an additional unpaid task for parents who are busy, may not be able to attend due to work schedules or child care issues, may not have had prior exposure to information on self-determination, and may have different cultural values. While discussing parent involvement during Session 6, some educators replied that some of their parents never responded to their efforts to communicate (e.g., emails or paperwork sent home). Another educator in the session suggested that they each need to directly reach out to parents about student involvement in the IEP in a way that works for each family, which likely means phone calls home. As a result of educator concerns and best practices to include parents, the researchers offered a second parent workshop at Session 9. In addition, the researchers and educators will continue to consider how to better support parent involvement, understand perceptions of parents, and consider cultural differences. The participant who explained the excitement of parents once they understood strategies and tried them with their children captured the most significant implication for practice: parents can be integral to the success of students when they are empowered with the tools being used in the classroom. Likewise, gaining an understanding of strategies being used in the homes of students can inform practice in schools.

Limitations to the Study

The researchers of this study are positively biased to special education practitioner experiences in creating opportunities for their students to practice self-determination skills, as they contracted with the school district to provide self-determination professional development sessions throughout multiple school years. The researcher's priority was to support and encourage educators in the development of their knowledge and practice. This need to support educators

during interactions and interviews made it impossible for the researchers to be unbiased observers during data collection. The researchers are all former special education practitioners. The lens through which data were coded is biased by the researchers' prior knowledge and experience of working with students with exceptionalities. Additionally, all participants were from the same school district in one geographic region. Various cultures may have different perspectives of the value of self-determination and how it can be practiced at home. Cultural contexts of families, school districts, and geographic regions must be considered for successful implementation of professional development and strategies to develop self-determination.

Implications for Future Research

Findings of this study support previous research that utilizing the SDLMI influences educator perspectives of students' abilities and thus, ability to create opportunities for self-determined actions in students (Shogren et al., 2014). Previous studies (i.e., Thoma, Nathanson, Baker, & Tamura, 2002) showed that many educators are unfamiliar with specific instructional materials. Myriad strategies educators utilized could be attributed to their increased understanding of self-determination and supporting materials, as most participants discussed how the training aided their implementation. Although the data in this study support the need for self-determination training, more exploration and research are needed in the area of professional development on self-determination. Future research studies should also address parent and student perceptions and experiences related to self-determination. Since creating opportunities to practice self-determination skills is a collaborative process that requires active and ongoing student involvement, investigating student and parent perspectives could enhance the frequency, quality, and relevance of student opportunities to practice self-determination skills.

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Examining the Effectiveness of Fidgets on Attention of Elementary Students with ADHD

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Abstract

Research demonstrates students with attention-deficit hyperactivity disorder (ADHD) and other attention difficulties benefit from using tools to expend energy in positive, socially acceptable means while not distracting others. Tactile fidgets may assist with self-regulated behaviors. This study examined the effectiveness of using hand and foot fidgets to increase the focused instructional attention of four elementary students with ADHD. All four participants selected and used their preferred fidget appropriately as directed. ABAB withdrawal design results indicated immediate level and trend change with a 45-55% overall attention gain. Results and implications for future research are discussed.

Keywords: attention, focus, fidgets, ADHD, elementary students

Examining the Effectiveness of Fidgets on Attention of Elementary Students with ADHD

Inattentive, impulsive and overactive behaviors often describe some students that have been diagnosed with attention-deficit hyperactivity disorder (ADHD) (American Psychiatric Association, 2013). Children with ADHD frequently display difficulty in sustaining attention, self-regulation, and hyperactivity (Fedewa & Erwin, 2011). Students diagnosed with ADHD often struggle in school settings where the environment requires attending to instruction, following directions, staying organized, and completing tasks (Prater, 2007). ADHD may affect intellectual functioning and memory which can display itself in underachievement in academic performance, increased grade retention, and persistent behavioral problems (Loe & Feldman, 2007).

ADHD has the diagnostic criteria of exhibiting "a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development" (Centers for Disease Control and Prevention, 2017, DSM-5 Criteria for ADHD, para. 1). The prevalence of children and adolescents between the ages of 4 and 17 receiving a diagnosis of ADHD by a healthcare provider in the United States has been reported by Visser et al. (2014) as approximately 11%. Similarly, Pastor (2015) reported increasing trends in the diagnosis of ADHD by healthcare providers as reported by parents from 7% (1997-1999) to 10.2% (2012-2014) for those between the ages of 5 and 17. Impulsive and uncontrolled behaviors often distract others from instruction as the hyperactivity is difficult to ignore (Stalvey & Brasell, 2006). Lack of academic success

and poor educational outcomes for students with ADHD begin early and persist throughout life (Loe & Feldman, 2007). Therefore, we believe it is essential for teachers to be equipped with the knowledge, skills, and abilities to provide interventions to support student success.

ADHD is a neurologically-based disability (American Psychiatric Association, 2013) that requires intervention to support students. Although medication may help some students with ADHD improve their focused attention, it does not have to be the primary tool to increase attention (Centers for Disease Control, 2015). When medication is used, the correct medication can take time to identify and may have negative side effects. The existing research suggests students with ADHD a physical outlet promotes positive educational performance and behavior for students with ADHD or similar characteristics (Thayer, 2017). However, physical activity does not have to be limited to taking place prior to instruction but can also be used during instruction. Thayer (2017) has suggested fidgets, or fine motor tactile stimulation objects (e.g., stress balls, cubes, and spinners), which thousands of children now use as toys due to the popularity at the time this paper was written, may be useful as an inexpensive and enjoyable intervention to enable students with ADHD to self-regulate behaviors.

Antecedent Interventions

For years, researchers have investigated interventions to assist students with ADHD in managing behaviors (Fedewa & Irwin, 2011; Kercood, Grskovic, Lee, & Emmert, 2007; Stalvey & Brasell, 2006). Interventions vary by time of implementation (i.e., a redirection versus a support given in advance) as well as the actual strategy or tool (e.g., visual cues versus fidgets). Antecedent interventions, strategies used in the prevention of unwanted behaviors, such as a daily schedule or checklist, have been found to prevent unwanted behaviors and increase self-control for students in classroom settings (Kern & Clemens, 2007). These interventions implemented prior to an observed off-task behavior (e.g., excessive body movement) could be used to prompt a replacement behavior. Limited information is available regarding studies supporting the effective use of tactile interventions, such as handheld manipulatives (e.g., cubes and stress balls), stability balls, and therapy balls.

Kercood et al. (2007) examined effects of antecedent fine motor tactile stimulation with four 9-year old students with characteristics of ADHD to improve academic performance. Each student used a handheld manipulative during a 20-min independent assignment. Two students demonstrated increased performance of 55% and 45% respectively on academic tasks while using a manipulative, while the other two students' performance did not significantly change. All students engaged in fewer off-task behaviors (decreases of between 14-21% per student) while utilizing fine motor tactile stimulation during instructional time. As positive as these results are, none of the participants in this study were formally diagnosed as having ADHD, which strengthens the requirement of that as a condition of our study. Additionally, all observations in the Kercood et al. (2007) study took place while students were engaged in paper/pencil tasks, which may have skewed the data as the pencil itself could have served as a tactile object.

Fedewa and Erwin (2011) investigated effects of stability balls (e.g., an inflatable fitness ball designed for balance and strengthening) on in-seat and on-task behavior for students with ADHD. They selected eight students—five with an ADHD diagnosis and three with behavioral

concerns consistent with an ADHD diagnosis. Each student in the class, including those not in the study, was provided with a stability ball instead of a standard class chair. While using the stability balls, students demonstrated a statistically significant improvement in on-task (i.e., 94%) and in-seat behavior (i.e., 80%).

Another study including kinesthetic strategies used therapy balls. Schilling, Washington, Billingsley, and Dietz (2003) found therapy balls (i.e., inflatable elastic ball) as classroom seats increased in-seat behavior of all three of the students with ADHD; however, results were reported in generalized terms without mentioning statistical significance. Following the study, participating teachers continued to use the therapy balls for all classroom students. Goodmon, Leverett, Rover, Hillard, Tedder, and Rakes (2014) also investigated the effects of therapy balls on classroom behavior of students with ADHD and dyslexia. Their focus was on the increase in desirable behaviors and decrease in undesirable behaviors of 24 fifth-grade students. Desirable behaviors included looking at the teacher, asking related questions, staying in seat, and keeping hands to self. Undesirable behaviors consisted of fidgeting, getting out of seat, talking off topic, and looking away from teacher or materials. The authors found undesired behavior frequency decreased between baseline and intervention in both a control and intervention class. However, the intervention classroom demonstrated statistically significant decreases in specific undesirable behaviors including looking away from teacher and fidgeting (i.e., Cohen's *d* effect size values ranging from .64 medium to 4.95 large). Significant increases in desirable behaviors (i.e., $p < .05$) were observed in the intervention classroom. After the study, students indicated they enjoyed therapy balls more than classroom seats and said they increased academic focus.

The effects of using stress balls, or handheld soft toys manipulated by the fingers to relieve stress, was investigated by Stalvey and Brasell (2006) to reduce distracting behaviors in a sixth grade language arts class. Of the 29 students in the study, several exhibited attention difficulties, although only one had a formal diagnosis of ADHD. Stalvey and Brasell provided a variety of stress balls to all students and allowed them to choose the one they preferred. Results demonstrated a mean decrease from 3.4 to 0 during instruction and a mean decrease from 2.5 to 0.9 during independent practice. Of the 29 participants, 19 reported feeling more calm and focused on writing when using the balls. The procedures Stalvey and Brasell (2006) used in their study (which produced positive results) support our use of similar procedures in providing choice of fidgets to the students.

The current literature demonstrates the effectiveness of stability balls, stress balls, therapy balls, and other handheld manipulatives to improve the attention of students with ADHD, which, ultimately should positively impact appropriate behaviors and academic performance (Goodmon et al., 2014). The purpose of this paper was to expand upon current research by studying hand and foot fidgets which are believed to be inexpensive, easy to acquire, and minimally disruptive (The Therapy Shoppe, 2017). Specifically, the authors wanted to determine if the use of the hand and foot fidget would increase focused attention during academic instruction in the general education classrooms in four elementary students with ADHD.

Method

Participants

As depicted in Table 1, we recruited four participants, three males and one female ranging in age from 5 to 10 years old, from a rural public elementary school in a southwestern state. The participating students met the following inclusion criteria: (a) current diagnosis of ADHD, (b) receiving special education services under an individualized education program (IEP), (c) current demonstration of off-task and inattentive classroom behavior as indicated by the special and general education teachers, (d) attending the same elementary school, (e) receiving instruction in both the special and general education settings, and (f) receiving instruction from the same special education teacher for reading. Additionally, all participants required repeated verbal reminders and/or prompts from the special and general education teachers to improve attention. Prior to the study, participants were recruited using a university Institutional Review Board (IRB) approved script, parent consent form, and student assent form. All participants were assigned pseudonyms for confidentiality.

Table 1
Participant Information

Name	Age	Grade	Ethnicity	Primary Disability	ADHD Medication	Preferred Fidget
Mason	5	K	Caucasian	ADHD	Yes	Foot
Gerry	8	2	Caucasian	ADHD	No	Hand
Cameron	8	2	Caucasian	ADHD	Yes	Hand
Korey	10	4	Caucasian	ADHD	No	Hand

Settings and Participants

After receiving university IRB and school district approval, all activities took place at the school, which served approximately 461 pre-kindergarten through eighth grade students, 65 (about 14%) of which receive special education and related services. Twenty-three percent of the school population is eligible for free and reduced lunch. The district ethnic diversity is Caucasian (76%), Native American (15%), Hispanic (5%), Asian (3%), and Black (2%). Participant observations were conducted during regularly scheduled instruction in the general education kindergarten (Mason), second grade (Gerry and Cameron), and fourth grade (Korey). Each participant had a different general education teacher with varying classroom configurations (e.g., rows of desks versus u-shaped desk formation) and schedules. The observations in general education environments varied based on participant and daily classroom schedules.

Mason. A 5-year old male in kindergarten, Mason received special education services for reading and respite. In a classroom of 25 students sitting at tables in groups of four, Mason sat near the center of the room facing the white board. The classroom walls had lockers, cabinets, brightly colored educational materials and decorations, and a white board. The teacher facilitated small group and independent activities while moving from table to table.

Gerry. An 8-year old male in second grade, Gerry received special education and related services for reading, writing, math, speech therapy, occupational therapy (OT), and physical

therapy (PT). In a crowded classroom of 23 students with desks situated in rows, Gerry was seated in the back row facing the front of the room. Classroom space was tight due to student desks, teacher desk, small group table, and student cubbies/storage. The teacher facilitated instruction from the front of the room for whole group activities and from the small group table during centers.

Cameron. An 8-year male in second grade, Cameron received special education and related services for reading, OT, and speech therapy. Cameron was seated near the back close to the door. A wall of windows was opposite the doors, cubbies lined one wall, and the chalkboard was in the front of the room. The teacher facilitated group instruction from the front of the room.

Korey. A 10-year old female, Korey rotated to four departmentalized fourth grade classrooms (reading, math, science, and social studies) while also receiving special education and related services for reading, math, writing, and speech therapy. Her general education classes averaged about 20 students each where her desk was always located in the middle of the classroom. In the reading and math classrooms, individual desks were in rows facing the front of the room, while student desks were organized into small groups or a u-shape to promote collaboration in science and social studies. Instruction in each of these classrooms was delivered to the whole group from the front of the room.

Materials

Two fidgets were used in this study. One fidget, the NewCool© Fidget (2017), was a handheld tube-shaped manipulative made of nylon netting with an enclosed marble which cost $8.99 for a box of 12. The design enables children to move the enclosed marble within the soft enclosure. Each is approximately 6 X 1.5 inches and weighs 2 ounces. This fidget can be viewed for purchase at this website (https://www.amazon.com/NewCool-Strong-Fidget-Stress-Relieve/dp/B01M3X1UEL/ref=sr_1_5?m=A3NJOC9SYHDU6K&s=merchant-%20items&ie=UTF8&qid=1501719868&sr=1-5). The second fidget, Fidgeting Foot Band™, consists of a durable rubber band approximately 1.5 inches wide at a cost of $3.99 per band. The band wraps around the front legs of a chair and is designed to allow students to push, pull, or bounce the band with one or both feet. The foot fidget can be viewed for purchase at this website (https://www.therapyshoppe.com/category/P2875-fidgeting-foot-band-xt-classroom-fidget-toys-sensory-focus-tools-foot-fidget-for-feet-band). Additional study materials included (a) an instructional fidelity checklist, (b) the Repeat Timer PRO (2012) app for iPhones, and (c) a momentary time sampling data collection form.

Design

To control threats to the internal validity of this single-case study, an ABAB withdrawal design was used (Gast & Ledford, 2014). Baseline data (A) were collected in each participant's general education classroom through repeated observations until a stable baseline appeared. Following baseline data collection, the students were instructed in the special education classroom on how to properly use the hand and foot fidget. The intervention condition (B) represents participants' use of their preferred fidgets in their general education classroom. Baseline data were then collected in the withdrawal condition (A) when we removed the fidgets. The second intervention phase (B) consisted of reintroduction of the participants' preferred fidgets. Following criteria established by Horner, Carr, Halle, McGee, Odom, and Wolery (2005), a minimum of five data

points were collected constituting a predictable pattern per participant. Results were visually analyzed for level and trend changes using guidelines developed by Gast and Ledford (2014).

Dependent Measure

Percent of 10-sec intervals of focused attention served as the dependent measure. Focused attention was operationally defined as (a) keeping eyes on instructional material or teacher, (b) keeping hands/feet to self, (c) talking appropriately on topic, (d) raising hand, (e) asking related questions, (f) not complaining, (g) remaining seated, and (h) participating in choral responses.

Interobserver Agreement

The overall average interobserver agreement (IOA) of the dependent measure equaled 90% with a range of 85% to 93%. We collected IOA data in six sessions—three times during baseline and three times during use of fidgets. We simultaneously watched and recorded 10-sec momentary time sampled behavior using a data collection sheet and Repeat Timer PRO (2012) app. When observing in person, data was collected independently using an iPhone with the timer set in the Repeat Timer PRO app. We shared a set of ear buds to collect data simultaneously upon hearing the beep each 10-sec. When the IOA observation was taken virtually, the onsite researcher opened a video conferencing platform on an onsite iPad which gave the offsite researcher a full view of the participant. The onsite researcher placed the Repeat Pro Timer app in front of the iPad camera, indicating to the remote researcher when it was time to push start to ensure they began and ended their 10-sec interval data collection simultaneously. The point-by-point agreement ratio (agreements divided by agreements plus disagreements and multiplied by 100) was used to calculate IOA (Kazdin, 1982).

IOA ranged from 85% (low) for Gerry to 93% (high) for Cameron. The overall IOA was conducted over 24% of the data points collected (i.e., Mason 16%, Gerry 48%, Cameron 17%, and Korey 22%), and achieved agreement of 90% to ensure consensus in definition of observed behavior and accurate data collection (Gast & Ledford, 2014).

Procedures

Data Collection

During baseline and intervention, all students were observed in their general education classrooms during academic instruction across all four phases (baseline—no fidgets, intervention—first use of fidgets, baseline—removal of fidgets, intervention—second use of fidgets). To capture participant attention across the day, observation times varied based on student and teacher instructional schedules and activities. We followed recommendations by Kercood et al. (2007) and observed students during a variety of classroom activities (i.e., lecture, test-taking, independent work, group work). Given the nature of ADHD, and how it manifests in off-task behavior, we determined varying the environment, time of day, and instructional activity in baseline and intervention conditions would provide more objective data. We collected data using a momentary time sampling chart. The Repeat Timer PRO (2012) app with a looping function was used to alert us to look up at participants every ten secs and document focused attention. During the remaining seconds until the next beep, we looked at our recording form.

During each observation, we quietly entered the classroom, then set up a place to take data where we could see the student clearly but create minimal distraction. Due to this inevitable disruption, we would wait for up to 5 mins for the student to settle back into a typical work habit before gathering data. Data collection sessions ranged from 9 to 20-mins of ten intervals of 10-sec each for each participant. Executive decisions were made regarding when to observe students and collect data to ensure instruction was taking place or student-level work (independent or group) was occurring during observations. In one instance, during a scheduled observation time, a class was watching a movie, so observations were rescheduled. Additionally, there were times, such as classroom transition times (i.e., students getting up to turn in work), when data collection would be temporarily suspended.

Baseline

Data for each participant were collected according to each of their school schedules and assigned instructional time in the general education classroom. Teachers were asked to operate under "business as usual" conditions during observations, which would include following typical daily schedules, routines, expectations, and levels of support. For example, in one second grade classroom, the teacher stands behind her podium as she addresses the class and calls on students in order by row so students know when their turn is coming. The expectation during observations is that she would continue in typical fashion. We collected baseline data until each participant reached a stable baseline. Students had given assent prior to baseline data collection; therefore, each participant was aware we were measuring focused attention.

Instruction in Using Fidgets

Once a stable baseline of behavior was established for each participant, instruction on the use of the fidgets occurred in student pairs (Korey and Mason, Cameron and Gerry) on two separate days. Each pair received 20 mins of instruction on how to use the hand and foot fidgets. We described each fidget as a tool, much like a pencil, and not a toy and discussed how fidgets help students become better at listening, calming down, focusing attention in class, and how they can be used with one or two hands/feet. We described the following fidget rules: (a) fidgets must only be used to enhance focus, (b) fidgets must be used as instructed and for the intended purpose, (c) fidgets must not distract others, and, (d) fidgets must remain silent. Next, we modeled correct use of the hand fidget, gave each student a hand fidget to hold and manipulate, and demonstrated examples of correct and incorrect hand fidget use. Prompts to encourage proper fidget use included a verbal prompt and reminder of how to use the fidget with modeling, followed by hand-over-hand modeling. Appropriate task-specific praise or visual cue (e.g., verbal encouragement or a thumbs up from teacher) was offered when the participant used the tool appropriately. Participants were verbally reminded by name when not using the tool appropriately, followed by instruction for the participant to set the fidget on the desk for two minutes. Participants picked up the fidgets again with a brief verbal reminder on appropriate use.

Participants chose their preferred fidget to use during each intervention observation. We repeated the above process with the foot fidget. Three of the four participants chose the hand fidget as a preferred tool, while one chose the foot fidget. Participants were able to change fidgets if desired; however, three of the four participants always used the initial fidget of their choice (i.e., hand fidget), and Mason changed fidgets but returned to original choice (i.e., foot fidget).

Use of Fidgets
Once students chose their fidget, we reminded each individual of the specific rules for proper use of fidgets. If students used fidgets inappropriately, we used the established sequence of least to most prompts to correct student use of the fidgets. At the end of about half of the fidget use sessions, we verbally praised students on their appropriate fidget use.

Instructional and Student Use Fidelity
Instructional fidelity consists of two phases (a) teaching students to use fidgets, and (b) student use of fidgets. Additionally, we followed the data collection procedures for both the hand and foot fidgets.

Teaching Students to Use Fidgets.
Our fidelity checklist titled *Instruction on How to Use Hand Fidget and Foot Fidget* included 36 sequential instructional steps. Beside each step, a level of implementation rating scale marked zero, one, or two indicated the quality of instruction with a score of two indicating highest level of implementation. A third-party observer watched the 36 steps being taught to the students and used the level of implementation rating scale to determine the level of implementation for each step. All steps were implemented correctly with an overall quality implementation score of 100%.

Results

During data collection, at the end of each 10-sec interval, we recorded data on the primary dependent measure—focused attention—and observed students' use of the fidget based upon the already described use of fidget rules. With one exception, students used fidgets appropriately at the end each 10-sec observation interval, which resulted in a 99% correct fidget use. Students used their fidgets 100% of the observed intervals.

Each point on the graphs in Figure 1 represents data from ten, 10-sec observations of students during academic instruction in general education classrooms. We collected baseline data until stable or decreasing patterns were established. Immediately following instruction on the use of each fidget, level changes occurred for all participants with increases of 80% to 100%, which stayed higher than baseline even as performance varied. During return to baseline, all participants demonstrated a drop in performance, yet slightly higher than original baseline levels. Upon reintroduction of the fidgets, students' focused attention increased and remained high. The sequential use of fidgets, withdrawal, and use again clearly established a functional relationship between use of the fidgets and increases in the dependent measure.

Cameron
During baseline, Cameron's focused attention was variable; therefore, we continued to take data until it stabilized, typically ranging between 30 to 40%. A noticeable level change and an increasing trend line resulted immediately following introduction of the fidget. Except for the fourth intervention data point, which dropped to 60%, Cameron's attention remained between 80% and 90%. Return to baseline resulted in an immediate drop below initial baseline levels, followed by a sharp increase to near intervention levels and remained at this level for the rest of the withdrawal phase. Re-introduction of the fidget resulted in an increasing trend line to 100%,

which then stabilized at an intervention level between 80% and 90%. We were not concerned with the unexplained increase at the end of withdrawal phase due to the overall trend of low attention during baseline and high attention during intervention.

Gerry

During the initial baseline collection, Gerry's focused attention was inconsistent; therefore, we returned for a second baseline collection which stabilized between 30 to 50%. A noticeable level change and an increasing trend line resulted immediately following introduction of the fidget. Focused attention during the first intervention remained between 70% and 100%. The withdrawal phase resulted in an immediate drop of performance with a slow increase including one overlapping data point, followed by a sharp decrease at the fourth data point to below initial baseline levels. Re-introduction of the fidget resulted in an increasing trend line to 90%, which then stabilized around 70%. The data collection for Gerry represents experimental control with reservation due to trends in initial baseline and intervention phases.

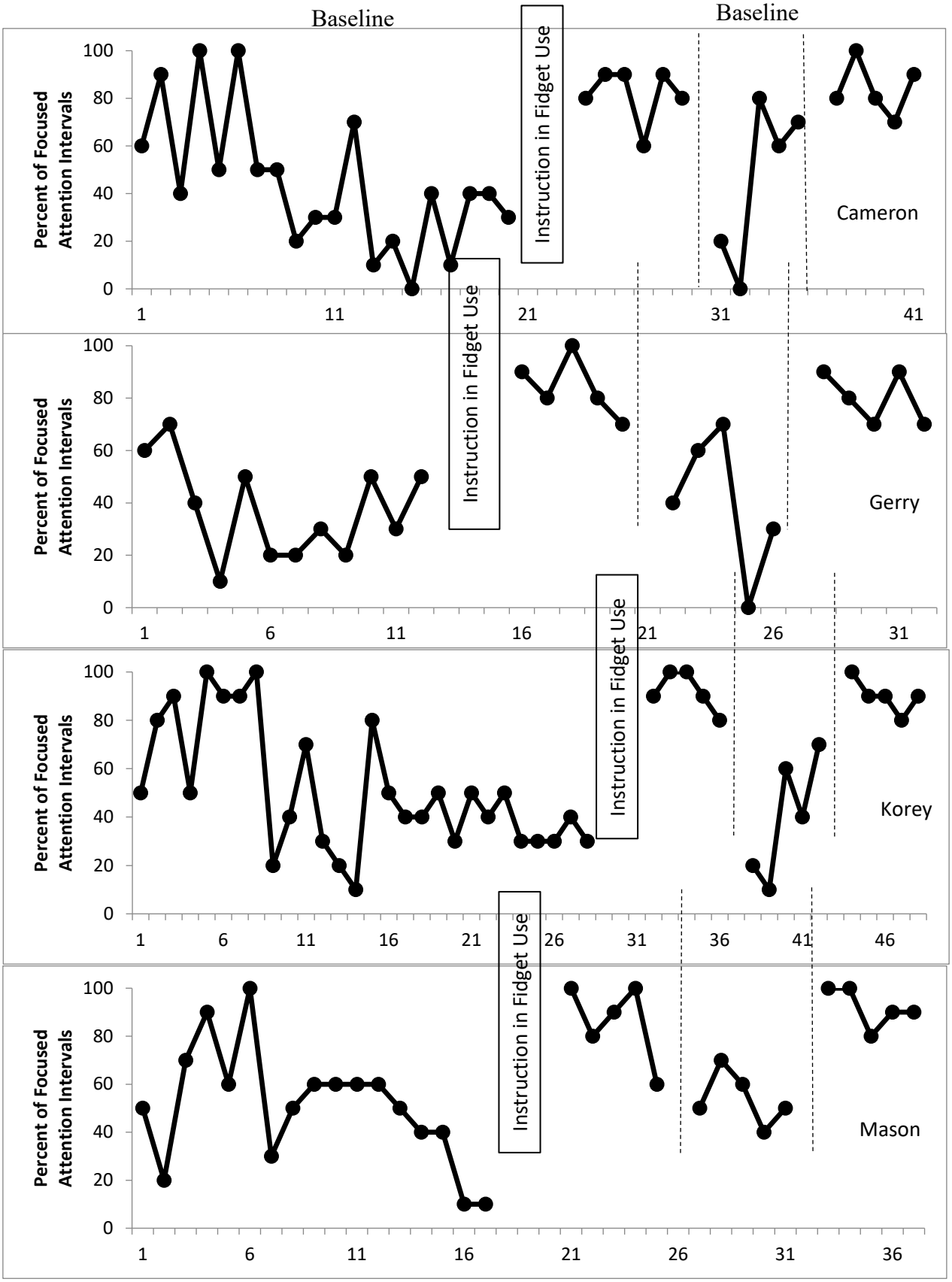
Korey

During baseline, Korey's focused attention was erratic over several sessions resulting in collecting baseline data in four separate sessions. Her focused attention became stable at 30% with the exception of the fourth data point at 40%. A noticeable level change and an increasing trend line resulted immediately following introduction of the fidget. Focused attention during the first intervention remained between 90% and 100%. Return to baseline resulted in an immediate drop of performance with an erratic upward pattern increase to 70%. Re-introduction of the fidget resulted in a stabilized trend line around 90%.

Mason

During baseline, Mason's focused attention varied resulting in collecting data over three separate sessions. Upon the third session, his attention remained stable and ranged between 40 to 50%, with a sharp decline at the fourth and fifth data point dropping to 10%. A noticeable level change and an increasing trend line resulted immediately following introduction of the fidget. Except for the fifth intervention data point, which dropped to 60%, Mason's attention remained between 80% and 100%. Return to baseline resulted in a drop of performance below intervention level, followed by a stable trend line around 50%. Re-introduction of the fidget resulted in an immediate increase in trend line to 100%, which stabilized at an intervention level around 90%.

Figure 1. Fidget Study Baseline and Intervention Data



Discussion

The focused attention for all participants increased with the intervention of the fidgets. All use of fidgets intervention phases showed an increase in focused attention over baseline percentages. Marked drops in attention during intervention for Mason and Cameron were due to external factors, such as classroom disruptions; while, for Korey and Cameron, sharp increases in attention during baseline were caused by individual instruction or proximity of teacher to the participant.

The ABAB withdrawal design used in this study demonstrated a functional relation between independent and dependent variables in that participant behavior (i.e., focused attention) changed when fidgets were introduced, reversed when fidgets were taken away, and improved when fidgets were reintroduced. Providing participants with two opportunities to use the intervention strengthened the internal validity of the findings. All participants had either high or inconsistent focused attention rates when data collection began. Over time, focused attention decreased and stabilized at a level that was more representative of typical behavior.

The results from this study align with those of other researchers who explored using tactile stimulation to increase focused attention (Goodmon et al., 2014; Schilling et al., 2003). Similar to Goodmon, et al. (2014) we observed more desired behaviors (e.g., eyes on teacher) through the use of tactile stimulation objects. Findings are consistent with additional previous research showing benefits from the use of a physical manipulative in the classroom for children with attention issues.

All participants fully engaged in using a fidget when made available to them during intervention and followed instructions for correct usage, with one exception that resulted in a verbal reminder. Observational data revealed each of the participants improved their focused attention in the classroom in socially acceptable ways. Improvements were observed across these four participants in behaviors, such as staying in seat, not engaging in off-topic conversations, and attending to instruction through eye contact with teacher or materials.

Currently, minimal research has been conducted on the effectiveness of these specific hand and foot fidgets as interventions for increasing focused attention in class for students with ADHD. Most existing research is on the use of therapy balls or stress balls (Kercood et al., 2007; Stalvey & Brasell, 2006; Fedewa & Erwin, 2011; Goodmon et al., 2014). Findings from this study may expand the current knowledge base on the use of inexpensive hand and foot manipulatives as tools to increase focused attention for students with ADHD or similar characteristics and provide a starting point for a large scale and or a longitudinal study.

Because the study included only four participants, application of knowledge across classes, other individuals and settings can be problematic and generalizing findings to larger groups cannot be done with precision. However, the results provide evidence of the effectiveness of the fidgets for the four participants in the single-case study.

Fidgeting in seats may be distracting to classmates (Stalvey & Brasell, 2006). The use of the hand fidget or chair band foot fidget is socially acceptable and allows students with attention

difficulty to expend energy in ways that will not disrupt others (Stalvey & Brasell, 2006). This might explain why parents were eager to consent for their child to participate in the study. During recruitment, parents expressed a desire for their children to have opportunities to help improve attention in class. Parents verbally recognized challenges their children were having and viewed the intervention as having a potential positive impact. Participants were excited to give assent to the study and demonstrated a desire to begin using fidgets in the general education classroom. During the withdrawal phase, all participants requested to use the fidgets even though we did not allow this.

Observations reflect that typical peers did not comment on (nor was attention drawn to) the use of the fidgets. Social validity of the fidgets was demonstrated by unsolicited requests made by two teachers following observation of the participant during an intervention phase. Gerry's teacher inquired as to if Gerry could continue to use the fidgets at other times due to his increase in attention observed during small group reading instruction. Mason's teacher inquired about access to the fidgets following the study. Participants verbally expressed a desire to learn to use the fidgets and continued to express excitement over the use of the fidgets throughout the phases. The implementation of fidgets as interventions align with Wolf's (1978) interpretation of socially appropriate treatments based on ethics, cost, and practicality.

Scheduling onsite observations was a challenge due to conflicting schedules and distance to the school. We observed students in person as much as possible, and, to collect more data, we used a video conferencing platform. This was done twice to collect IOA data simultaneously while one researcher was at the school, and the other was at a remote location. The ability to collect data remotely using a video conferencing platform demonstrated a benefit of modern technology and facilitates research collaboration across long distances.

Limitations and Suggestions for Future Research

The primary limitation of the study is lack of time to comprehensively conduct the study. Study duration from baseline through withdrawal phase was three weeks. Some participants' last data point rose during baseline; however, since we observed a predictable pattern in their attention, the intervention was introduced due to time constraints. We would have preferred to extend the baseline and intervention phases in the general education classroom for another replication, followed by additional weeks of maintenance. Greater time would have allowed (a) more time for participants to get comfortable using the fidgets, (b) for the novelty of the fidgets to wear off, and (c) for additional data points to be collected. An additional limitation to our study is the lack of participant information.

Although all four participants showed increases in focused attention, caution is necessary in generalizing findings to larger groups due to unique characteristics of each student and the few participants in the single case study. While the hand and foot fidget are commercially available, other items may serve as fidgets for the purposes of focused attention. For example, rubber bands, marbles and other tactile items may be useful for students to manipulate. Future research should investigate methods for focusing attention using everyday items. An additional limitation is lack of diversity in race and ethnicity, which could be studied in the future.

Each observation varied by participant, teacher, and classroom schedule; however, some teachers did not operate as they normally would and changed activities or schedules to meet the perceived needs of the study, which may have affected the participants' attending behavior. For example, some teachers transitioned to direct instruction from independent assignments upon observation. It was also noted that more individualized attention was given to study participants than what is typical. Changes in participant behavior were observed when teachers provided one-on-one assistance to participants versus when they facilitated whole group instruction.

To encourage the use of hand or foot fidgets, a cost benefit analyses should be conducted to determine if fidgets would improve focused behavior while producing improvements in academic performance or if other tools, such as therapy balls or moving seats, might prove to be more effective to support students with ADHD. Time was insufficient to allow participants to use both fidgets to determine whether one fidget was more effective than the other. Additionally, three of the four participants preferred the hand fidget over the foot fidget, which did not provide an opportunity for us to extensively observe the effect of the lesser chosen fidget. Future research could focus on determining the effectiveness of each fidget on focusing attention.

Future research should be conducted to determine the best way to sustain attention over time. This study allowed participants to use fidgets during intervention. Additional research is needed to determine if the use of fidgets fades over time while focusing attention. Another area to explore is if focused attention could be maintained over time with periodic use of a fidget.

Implications for Practitioners

Using evidence- and research-based interventions for students with ADHD is essential. Practitioners should adhere to this principle while continuing to investigate other ways of supporting students in school. Research has established that providing tactile stimulation for increasing attentive behavior is an evidence-based practice (Fedewa & Erwin, 2011; Stalvey & Brasell, 2006). Given this information and the positive feedback received from the general education teachers in our study, teachers working with students who have attention difficulties have the opportunity to take advantage of the research conducted and findings related to improved attention through the use of tactile objects prior to and/or during instruction. Although the sample size was small in our study, the procedures we used to teach the proper use of the fidgets as something other than a toy are easily replicated in the classroom. Using the hand fidget not only helped one student focus his attention on instruction but it also helped provide him with a more appropriate way to channel his energy without disrupting others and without getting off-task. For all four of the students, they were able to pay more attention to instruction and/or the task at hand while using the fidget of their choice. All four of the students used the fidgets, enjoyed having them in class, and even continue to ask for them well-beyond the conclusion of the study. No teacher reported a distraction or dislike of having the fidgets in class. Based on the preliminary findings of this ABAB withdrawal design study, further research should be conducted on a larger scale to determine the effectiveness of using fidgets during classroom instruction for students with ADHD, or those exhibiting off-task and inattentive behavior.

Conclusion

Using tactile stimulating devices, such as hand and foot fidgets, to help students with ADHD increase focused attention is a promising practice. The present study added to the research base in the area of focused attention and ADHD. Results contribute to an increased understanding of available tools for helping students expend energy in a socially appropriate way in the classroom, identified areas where additional research is needed, and offered recommendations for practitioners wishing to utilize similar fidgets.

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Appendix A. Interview Questions

1. Thank you for taking the time to participate in an interview today. Can you start by telling me the type of setting and grade level where you teach? For example, do you teach in a self-contained classroom or pull-out students in general education settings for one-on-one services?

2. For how long have you been working in that setting and teaching in general?

3. Thinking back on the professional development sessions in which you participated that centered around self-determination, what lessons or strategies have stayed with you?

4. What does self-determination mean to you?

5. Can you share some examples of how you might create opportunities for your students to practice developing self-determination skills?

6. In creating opportunities for students to practice self-determination skills, what have been some challenges you've experienced? Successes?

7. What have your experiences been like with the parents of your students in terms of creating opportunities for practicing self-determination?

8. What advice might you give to other special education professionals if they would like to create opportunities for their students to practice self-determination?

Autism Spectrum Disorder: A Cross-cultural Variability in Personal Identity

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Abstract

This mixed-methods cross-cultural study compares the life narratives of personal identity in people with high functioning Autism Spectrum Disorder (ASD) in Canada and Pakistan using a multifaceted model of personality. Forty-six male participants (half diagnosed with ASD) were recruited from Karachi, Pakistan, and the Greater Toronto Area, Canada. People with Autism Spectrum Disorder were matched with non-ASD according to age and academic education. They were interviewed and given self-report questionnaires about different aspects of identity. The Canadian ASD group was significantly higher in social identity, as compared to the Pakistani ASD group; the Pakistani ASD group placed greater emphasis on communion in their narratives than did the Canadian ASD group. Both ASD groups placed greater emphasis on personal agency, and valued conservation significantly more highly, than did non-ASD participants. These results support the McAdams and Pals model, showing how biology and culture mutually inform personal identity narratives.

Keywords: Personal Identity, Autism Spectrum Disorder, Personal narrative, Cross-cultural

Autism Spectrum Disorder: A Cross-cultural Variability in Personal Identity

Personality psychologists have long sought to construct a comprehensive framework for understanding the whole person (e.g., Allport, 1937; McCrae & Costa, 1999; Kluckhohn, & Murray, 1953; Murray, 1938; Pratt & Matsuba, 2018; Stern, 1938). Drawing from McCrae & Costa's (1999) five-factor theory and the scholarly writings of Sheldon (2004), McAdams and Pals (2006) propose five guiding principles for understanding the whole person (also see McAdams & Zapata-Gietl, 2014).

This study adapts McAdams and Pals (2006) and Stern's (1938) conception of the experiencing person as integrating all these aspects in an individual's effort to live a good life to explore the unique identity of people with Autism Spectrum Disorder (ASD), as distinct from the general

population. More specifically, because the effects of biology (e.g., Ashton, 2013: Canli, 2006) and culture (e.g., McLean et al., 2018) are invariably confounded within any given personal development, we compare two expressions of human nature (typically developed and autism spectrum disorder) in two different cultures (Pakistan and Canada).

The New Big Five of Personality

Stern (1938) advocated the need for psychologists to study individual personal experience in ways that integrate biological and psychological attributes. Developing this perspective, McAdams and Pals (2006) propose five guiding principles for understanding the whole person: (1) *evolution and biological human nature* (i.e., individual biological variations and developmental patterns), (2) self-reported *dispositional traits* (i.e., personal identity characteristics such as friendliness or loneliness) (3) *characteristic adaptations* (i.e., the personal goals and values required for social roles), (4) *life narratives* (i.e., individuals' personal life stories that help to interpret their behaviour and establish their identity), and (5) *cultural context,* which influences the expression of personal traits, characteristic adaptations and life narratives. However, we agree with Renner (2010) that we need to complement and enrich this ''New Big Five'' with the three primary characteristics of persons proposed by Stern (1938; also see Shipley, 1961): multiplicity in unity (*unitas multiplex*), purposefulness, and individuality.

Evolution and Biological Human Nature

McAdams & Pals' (2006) first principle for understanding the whole person is the need to consider variations in human biology, since some characteristics of human behaviours—such as those typical of people with autism spectrum disorder (e.g., Cohen, et al., 2005; Freitag, 2007)—have biological underpinnings including imbalance neurochemicals (Guo & Commons, 2017). For example, studies have found atypical growth in the amygdala (a brain region responsible for emotional reaction) for individuals with ASD (e.g., Carper et al., 2006; Herrington et al., 2017). Studies have also found genetic (biological) markers for autism spectrum disorder that impact brain areas associated with social interaction and communication skills (e.g., Edmonds, 2008), helping to explain why people with ASD have difficulties around facial perception (e.g., Klin, et al., 2002). Many children with ASD have delayed language development, but they start talking fluently after the age of five (Powell, 2017).

Classical autism is known for impairments that include difficulties in social-communicative and behavioral domains, associated with learning difficulties, below average IQ, and language delays (APA, 2013). High functioning autism spectrum disorder shares the features of classical autism but without the associated learning difficulties or language delays, showing normal, or even above average, IQ (e.g., Asperger, 1944; Powell, 2017; Wing, 1981). Studies have also found that people with high functioning autism show an inclination to maintain norms and routines.

Dispositional Traits

Personality traits commonly identified through self-report questionnaires are understood in this model to be dispositions to act in particular contexts, McAdams & Pals' (2006) second principle for understanding the whole person. More specifically, one of the three characteristics of persons by Stern (1938), traits characterizing identity can be examined through people's self-understanding of (1) personal identity, (2) social identity (i.e., self in social context), (3) collective identity (i.e., self in relation to community, country and religion), or (4) relational

identity (i.e., self within intimate relationships with friends or romantic partners). According to Cheek and Briggs (1982) these four categories of identity constitute principle aspects of peoples' understanding of themselves. Recently, Cheek and Cheek (2018) explored how these four identity orientations distinctively effect on individuals' cognition, emotion, and behavior.

Individuals with ASD have a distinct pattern of self-understanding in this broad sense; they socialize and communicate with their friends and partners in ways different from the general population (e.g., Edmonds, 2008; Gutstein & Whitney, 2002): A deficit in social-cognitive development is also evident in those diagnosed with ASD (Burnside el al., 2017) Many prefer to live alone rather than intermingling with others (e.g., Tantam, 2012), and commonly display personality attributes such as honesty, perseverance, and a strong sense of justice (McMullen, 2000).

Characteristic Adaptations

McAdams and Pals (2006) argued that beyond differences in personal traits, individuals' lives vary due to motivational and developmental adaptations and diverse goals and values required for social roles. This also aligns with Stern's (1938) purposefulness (one of the three characteristics of persons). Schwartz (1992) developed a comprehensive model of basic human values that was used in a cross-cultural comparison of over 60 different nations. The ten values contained in Schwartz' *Basic Human Values Scale*—(1) *self-direction* (2) *stimulation* (3) *hedonism* (4) *achievement* (5) *power* (6) *security and safety* (7) *conformity* (8) *tradition* (9) *benevolence*, and, (10) *universalism*—are thought to reflect 4 basic value-orientations: (1) openness to change, (2) conservation, (3), self-transcendence, and (4) self-enhancement (also see Schwartz, 2015).

Individuals with ASD have different value orientations and motivations than do typically developed people in the general population. For example, using Schwartz' value scale (1992), Hirvela and Helkama (2011) found that people with ASD value tradition and security, and have a greater tendency to conform, as compared to non-autistics of similar ages and with equivalent levels of education. People with ASD also scored lower in the values of stimulation and benevolence compared to non-autistics. Some characteristic dispositional traits of people with ASD (e.g., honesty and truthfulness) may be due to a high valuing of conformity.

Life Narratives

Life narratives are another important dimension to the understanding personal identity. Many studies have shown that people understand themselves through their own life stories (e.g., Fivush et al., 2011; Kogler, 2012; Pasupathi & Hoyt, 2009; Pratt & Matsuba, 2018; Singer, 2004). During late adolescence and emerging adulthood, in particular, people strive to be understood through their life stories (McAdams, 2011). Themes of personal agency and communion are particularly important to people's life stories (e.g., Bakan, 1966; Chen et al., 2018; McAdams, 1980; Mansfield & McAdams, 1996): personal agency is associated with independent life accomplishments, whereas communion includes others in one's life accomplishments and involves a sense of belongingness (McAdams, 1993). Ideally, people live with the balanced integration of agency and communion (Bakan, 1966). Studying a large sample of adults and college students in a community, McAdams and his colleagues (1996) coded the theme of agency as: (1) self-mastery, (2) status/victory, (3) achievement/ responsibility, and (4)

empowerment; they coded the theme of communion as: (1) love/friendship, (2) dialogue, (3) caring/help, and (4) unity/togetherness.

The life stories of people with high functioning ASD have helped researchers understand their lives (e.g., Smith 2018) and recognize their extraordinary abilities in mathematics (e.g., Newport, 2001; Smith, 2018; Tammet, 2006) and creative writing (e.g., Lawson, 2006; William, 1992, 1994). Temple Grandin (1995a, 1995b), for example, emphasizes her strength in visual learning and her enjoyment of visually stimulating objects. Honesty and straightforwardness are prominent features in narratives of most people with ASD (McMullen, 2000). Some autobiographies also suggest that people with high functioning ASD reject the idea that they need to be "cured" (e.g., Sinclair, 1992). They consider autism a distinct way of being, not to be a disease or disability.

A few studies (e.g., Bruck et al., 2007; Vuletic, 2010; Vincent et al., 2017) have explored the autobiographical memories of people with ASD through structured questionnaires. Bruck and colleagues (2007) asked children with ASD to provide them with narratives of their life events. Their results showed that children with ASD recalled fewer life events, that their memories lacked detail, and that the participants had difficulty recalling personal factual knowledge. Vuletic (2010) conducted detailed life histories of 6 adults diagnosed with high functioning ASD that included their childhood memories and future aspirations. Vincent and colleagues (2017) explored the challenges and successes of seven university students on the spectrum through their autobiography.

Cultural Context

McAdams & Pals' (2006) final principle for understanding the whole person is that people's life stories reflect prevailing cultural norms in play when developing narrative identity (e.g., Flum, & Buzukashvili, 2018). Building on Erikson's theory of psychosocial development (Erikson & Erikson, 1997), Hammack (2011) argued that the self is highly connected to society and that narrative identity can be better understood by keeping culture and the social environment in mind. In fact, cultural differences surface in the *traits* people associate with their identity and the purposes they strive to accomplish as individuals (Renner, 2010; Stern, 1938). For example, people in collectivist societies share common goals of group harmony (e.g., Hammack, 2011; Markus & Kitayama, 1991), while people in individualistic societies emphasize personal uniqueness (Fiske et al., 1998). Thus, narratives identity of a person—including one's understanding of personal agency and communion—is influenced by the culture of the narrator. However, there has been relatively little cross-cultural exploration of agency and communion to conceptions of narrative identity.

There is also little research examining autism spectrum disorder cross-culturally. Freeth and colleagues (2013) found cultural variability in autistic traits between individuals with autism from Western culture (UK) and two Eastern cultures (India and Malaysia). Wakabayashi and colleagues (2007) found cross-cultural stability in the empathy and systemizing theory of sex differences, and extreme male brain theory of autism between participants diagnosed with high functioning ASD from the UK and Japan. They found that individuals with high functioning ASD had significantly higher scores on the Systemizing Quotient (SQ) than non-autistics. Their results also revealed that the non-ASD group had significantly higher scores on the Empathizing

Quotient (EQ) than the high functioning ASD group. Chung and colleagues (2012) investigated challenging behaviors including aggression, self-injurious behavior, and stereotypical behavior in children with ASD cross-culturally. The study found relatively few differences in the presence and severity of challenging behaviors between the participants from the four countries (the USA, South Korea, Israel, and the UK). This consistent pattern shows that challenging behaviors exhibited by individuals with ASD have a high degree of universality, even when diverse cultural contexts are taken into account.

The Present Study

This cross-cultural mixed-method study investigates the whole personal identity of people with high functioning ASD in Canada and Pakistan by exploring their self-reported identity traits, values, and life narratives. Traits are measured through standardized questionnaires. The life story interview questions were adapted from Ferrari, et al., 2011 (also see Khan and Ferrari, 2018). We frame our analysis in light of McAdams & Pals' (2006) 'new big five' and Stern's (1938) perspective of multiplicity in unity (*unitas multiplex*), purposefulness and individuality.

Methods

Participants

Forty-six male participants took part in this study: 24 were recruited from Karachi, Pakistan, and 22 were recruited from the Greater Toronto Area (GTA), Canada. Of these 46 participants, half had been diagnosed with autism spectrum disorder by qualified professionals; the other halves were typically developed people from the general population (non-ASD). All 22 Canadian participants in this study were born or raised in Canada. All 24 Pakistani participants in this study were also born or raised in Pakistan. Participants were matched for age, education, and marital status.

Recruitment. To recruit people with high functioning ASD various organizations serving people with ASD were contacted both in Karachi, Pakistan and in the GTA, Canada, serving those who receive a diagnosis of ASD from qualified professionals. The organizations where samples were recruited in the GTA, Canada, included *Kerry's Place Autism Services, Geneva Centre for Autism, The Redpath Centre for Social and Emotional Development,* and *Autism Ontario.*

The organizations that were contacted for participants recruited in Karachi, Pakistan included: *MaAyesha Memorial Centre; The Education Foundation; Institute of Behavioural Psychology; Department of Professional Psychology, Baheria University; Department of Special Education, University of Karachi; and Department of Psychiatry, The Aga Khan University Hospital*. Ethical approval was received from all these organizations.

In Pakistan, most interviews were conducted in the office of the Education Foundation, located at Mehmoodabad, Karachi; some were also conducted at the MaAyesha Memorial Centre, located at Shahrah-e-Faisal, Karachi. In Canada, interviews were conducted in the office of Kerry's Place Autism Services located at Brampton, and at the University of Toronto, Toronto.

Non-ASD participants from the general population were recruited randomly from the public and university libraries in Canada and Pakistan. In Pakistan, non-ASD participants were mostly interviewed in the office of The Education Foundation. In Canada, non-ASD participants were interviewed mostly at the University of Toronto and in a small reading room at the Mississauga Central Public Library.

Age. The 23 participants with ASD (M = 24. 39, SD = 5.00) were age matched with typically developed peers (M = 22. 95, SD = 4.26) [1]. An independent-sample t test indicated that the mean age of people with ASD (M = 24.39, SD = 5.00) did not differ from the mean age of those non-ASD (M = 22.95, SD = 4.26), $t(42.92) = 1.046$, $p = .30$, two-tailed.

Education. The results of an independent-sample t test indicated that years of academic education did not differ between participants, $t(38.08) = 1.609$, $p = .11$, two-tailed; thus, the mean years of education for people was similar for participants with ASD (M = 13.69, SD = 2.70) and the non-ASD groups (M = 14.78, SD = 1.78).

Marital status. Marital status did not differ between participants, $t(36.22) = 1.036$, $p = .30$, two-tailed; most participants were never married.

Procedure

To promote familiarity and comfort, interviews were conducted face-to face in the participants' native language (Urdu in Pakistan, and English in Canada). Participants met with the interviewer for one session lasting from about 45 to 90 minutes and included both open-ended interviews and self-report questionnaires[2]. In terms of interview questions, participants were asked a set of broad questions about their major goals of life, some of the most memorable events of life, difficult situations they have encountered in their life, and their concepts of their own personal identity. Verbal assent was given before beginning the interviews, which were audiotaped and transcribed verbatim. (Interviews of Pakistani participants were first transcribed verbatim in Urdu, and then translated into English.)

Measures

Disposition. Participants completed the Aspects of Identity Questionnaire (AIQ-**IV),** (Cheek, et al., 2002; also see Cheek and Cheek, 2018) to identify people's identity orientations in 4

[1]Most participants were between 18-30 years old. However, 1 participant from the Canadian non-ASD group was 31 years old, 1 participant from the Pakistani ASD group was 32 years old, and 2 participants from the Canadian ASD group were 31 and 33 years old.

[2]All interview questions were translated into Urdu and translated back into English. However, because English is the second official language in Pakistan and most schools, colleges, and universities have adopted English as their language of instruction, Pakistani participants had no difficulty reading and understanding English questionnaires.

categories: *personal* (10 items)*, social* (7 items)*, collective* (8 items)*,* and *relational* (10 **items).** Participants' responses were noted on a 5-point Likert-type scale ranging from 1 (Not important to my sense of who I am) to 5 (Extremely important to my sense of who I am).

Characteristic adaptations. Participants were also given the *Human Values Scale – PVQ-ESS* (Schwartz, 1992). This scale included 23 items divided into 10 basic values: (1) self-direction, (2) stimulation, (3) hedonism, (4) achievement, (5), power, (6) security, (7) conformity, (8) tradition, (9) benevolence, and (10) universalism. Participants' responses were recorded on a 6-point Likert-type scale ranging from 1 (Very much like me) to 6 (Not like me at all). Schwartz has grouped these 10 values into 4 broad dimensions: openness to change (values 1, 2, and 3), self-enhancement (values 4 and 5), conservation (values 6, 7, and 8), and self-transcendence (values 9 and 10).

Life narratives. Participants were also asked a few questions about their identity through their life narratives. These questions were adapted from a study by Ferrari et al., 2011 (also see Khan and Ferrari, 2018).

Life narrative interview coding scheme. Drawing from Bakan (1966), McAdams (2001, 2011) and Stern (1938) a coding scheme was developed to identify two major themes in people's life stories: (1) communion (help and care, social being, meaningful relationships, collective being, and contribution to society), and (2) agency (achievement/accomplishment, personal growth, and individuality). Two coders identified these themes in people's life stories as they relate to participants' self-understandings of their personal unity, individuality and purpose.

All transcripts were coded by the first author; a second coder scored 20% of the transcripts selected at random. Interrater reliabilities for themes of communion were: help and care (85%), meaningful relationships (82%), social being (87%), collective being (93%), and contribution to society (89%). Interrater reliabilities for the themes of agency were: achievement (89%), personal development (87%) and individuality (93%).

Results

Reliability of Measures

Internal reliability of the scales. The internal reliability alpha of the various aspects of identity scale for the ASD group were: personal (α =.81), social (.88), collective (.85), relational (.91) identities, and personal integrity (.72); and for the non-ASD group, personal *(*α =.81), social (.82), collective (.86), relational, and (.86) identities. The reliability for the 10 factors of the Schwartz Values Scale was quite low for some factors, so only the 4 broad values orientations were considered in this study. The internal alpha reliability of the ASD group was openness to change (α =.69), conservation (.72), self-transcendence (.75) and achievement (.83); and for the non-ASD group, openness to change (α =.66), conservation (.67), self-transcendence (.63), and achievement (.67).

Disposition

Table 1 shows the means and standard deviations of the AIQ-IV scale for the samples of various groups in this study.

Table 1
Mean scores and standard deviations of the aspects of identity and the value scale

Scales	ASD Overall (n = 23)	Non-ASD Overall (n = 23)	ASD Pakistan (n = 12)	Non-ASD Pakistan (n = 12)	ASD Canada (n = 11)	Non-ASD Canada (n = 11)
Identity						
Personal identity	3.98	4.02	4.20	3.75	3.75	4.31
	(0.57)	(0.64)	(0.42)	(0.70)	(0.64)	(0.43)
Social identity	2.41	3.19	1.98	3.29	2.88	3.09
	(1.03)	(0.97)	(0.69)	(1.03)	(1.16)	(0.93)
Collective identity	2.45	3.17	2.37	3.38	2.54	2.95
	(0.90)	(0.78)	(0.92)	(0.76)	(0.92)	(0.78)
Relational identity	2.94	3.99	2.26	3.71	3.68	4.29
	(1.10)	(0.68)	(0.81)	(0.74)	(0.90)	(0.49)
Social identity (overall)	2.60	3.45	2.20	3.46	3.03	3.44
	(0.85)	(0.59)	(0.64)	(0.77)	(0.86)	(0.32)
Values						
Conservation	5.32	4.88	5.50	4.64	5.13	5.13
	(0.68)	(0.75)	(0.67)	(0.85)	(0.67)	(0.56)
Openness to Change	3.56	4.55	3.36	4.26	3.78	4.87
	(0.54)	(0.69)	(0.54)	(0.72)	(0.47)	(0.51)
Self-Transcendence	4.98	5.00	4.96	4.86	5.00	5.15
	(0.55)	(0.56)	(0.52)	(0.64)	(0.60)	(0.45)
Achievement	3.52	4.45	3.41	4.37	3.63	4.54
	(0.91)	(0.94)	(1.12)	(0.85)	(0.63)	(1.05)

A two-way ANOVA found a significant interaction, $F(1, 42) = 2.063$, $p = .04$, between the two ASD groups on *overall social identity*[3]: people with ASD living in Pakistan scored significantly lower on overall social identity as compared to the non-ASD group in Pakistan, $F(1, 42) = 16.845$, $p = .001$), whereas people with ASD living in Canada scored similarly on overall social identity to the non-ASD group in Canada. More specifically, we found no differences between the two non-ASD groups; however, a higher score for overall social identity was found among the Canadian ASD group compared to those from the Pakistani ASD group, $F(1, 21) = 6.801$, $p = .01$.

We next consider various aspects of the AIQ-IV individually: Mean scores on *relational identity* of the Pakistani ASD group ($M = 2.26$, $SD = 0.81$) were significantly lower than the Canadian ASD group ($M = 3.68$, $SD = 0.90$), $F(1, 42) = 15.589$, $p = .001$; furthermore, the mean scores of both ASD groups were significantly lower than the mean scores of both non-ASD groups, $F(1, 42) = 21.284$, $p = .001$. Finally, the mean scores of the Pakistani non-ASD group were significantly lower than those of the Canadian non-ASD group, $F(1, 21) = 4.661$, $p = .04$. No significant differences found for any of the other dimensions of the AIQ-IV.

[3] A measure we created that combines the social, collective, and relational identity items of the AIQ-IV, in order to contrast all social aspects of identity with the personal aspect of identity.

Characteristic Adaptations

Recall that Schwartz's 10 values were grouped into 4 main dimensions (i.e., conservation, openness to change, self-transcendence, and achievement). Table 1 shows the means and standard deviations of these four values for the groups in this study.

A two-way ANOVA found a significant interaction on the value of *conservation*, F (1, 42) = 4.233, p = .04: the Pakistani ASD group valued conservation more highly than did the non-ASD group from Pakistan, whereas the Canadian ASD group valued conservation no differently than non-ASD Canadians. The two non-ASD groups did not differ on the value of conservation. However, a one-way ANOVA found mean scores of both ASD groups were significantly higher on the value of conservation than those of the non-ASD groups, F (1, 42) = 4.386, p = .04. The value of *openness to change* did not differ significantly between the two ASD groups or between the two non-ASD groups; however, the mean scores of both ASD groups were significantly lower than those of the non-ASD groups, F (1, 42) = 34.703, p = .001. Likewise, mean scores between the two ASD groups and the two non-ASD groups did not differ on the value of *achievement*; however, the mean scores of the ASD groups were significantly lower compared to the non-ASD groups on the value of achievement, F (1, 42) = 11.282, p = .002. No significant differences between the ASD groups, the two non-ASD groups, or between both ASD and non-ASD group considered together were found for the value of *self-transcendence*; however, in depth analyses found differences in sub-categories of the Schwartz Value Scale[4].

Qualitative Analysis of Life Narratives

Let us now consider how people with and without ASD from Pakistan and Canada understand themselves through two major themes in their life narratives: (1) communion, and (2) personal agency.

Communion. Table 2 shows mean scores and standard deviations for the theme of communion and its components. An independent-samples t test found that the Pakistani ASD group referred to communion more often than did the Canadian ASD group, t(19.41) = 1.91, p = .07, two-tailed, d = 0.84. In fact, both ASD and non-ASD groups from Pakistan made greater reference to communion than did either the ASD or non-ASD groups from Canada, t(43.02) = 2.10 p = .04, two-tailed, d = 0.61.

Table 2

Mean and standard deviations for the themes of communion and agency.

Themes of narrative identity	ASD Pakistan	Non-ASD Pakistan	ASD Canada	Non-ASD Canada
Communion overall	0.88 (0.58)	0.96 (0.38)	0.49 (0.39)	0.81 (0.30)
Help & care	2.41 (2.42)	2.33 (1.61)	0.72 (0.46)	1.00 (0.63)

[4] An in-depth analysis of the sub-components of the PVQ showed that people with ASD gave greater value to conformity than those in the non-ASD groups (t(44) = 2.251, p = .02) and less value to power (t(44) = 4. 092, p = .001), achievement (t(44) = 3.425, p = .001), hedonism (t(44) = 4. 208, p = .001), stimulation (t(44) = 6.951, p = .001)and tradition (t(44) = 1.983, p = .05).

Relationship	0.83 (0.71)	0.75 (0.62)	0.72 (1.00)	1.45 (0.52)
Social being	0.25 (0.45)	0.41 (0.51)	0.18 (0.40)	0.45 (0.52)
Collective being	0.33 (0.49)	0.25 (0.45)	0.09 (0.30)	0.27 (0.46)
Societal Contribution	0.58 (0.79)	1.08 (0.51)	0.72 (0.64)	0.90 (0.53)
Agency overall	1.50 (0.55)	1.27 (0.69)	1.36 (0.48)	1.03 (1.03)
Achievement/Accomplishment	1.75 (1.05)	0.75 (0.75)	1.36 (1.20)	0.90 (0.70)
Personal development	2.08 (1.50)	2.25 (1.65)	1.81 (0.75)	1.45 (0.93)
Individuality	0.66 (0.49)	0.83 (0.57)	0.90 (0.30)	0.72 (0.46)

This overall difference reflects a difference in the subthemes associated with communion. For example, the theme of *help and care* was significantly lower in the Canadian sample: The theme of help and care is characterized by statements like the following: "I like to help people, I make arts and crafts. I also make boxes, piñatas, and designs." (Interview 7, ASD Pakistan) or "I used to help my mom out, when she needed it, after my dad died" (Interview 26, ASD Canada). There were no differences between the ASD and non-ASD groups on the theme of help and care, however, the Pakistani ASD group made significantly greater mention of the theme of *help and care* than did the Canadian ASD group, $t(11.88) = 2.362$, $p = .03$, two-tailed; likewise, the Pakistani non-ASD group made significantly greater mention of this theme than did the Canadian non-ASD group, $t(14.54) = 2.648$, $p = .01$, two-tailed.

The theme of meaningful relationships was characterized by statement like the following: "The goals for my friends and my family are to keep on interacting socially and professionally with them and also to increase communication with them" (Interview 6, ASD Pakistan) or "I want to settle down with someone and get married" (Interview 30, ASD Canada). None of the groups (ASD or non-ASD) differed in mention of meaningful relationships, however, an independent sample *t* test found that the Canadian non-ASD group mentioned meaningful relationships significantly more often than did the Pakistani non-ASD groups, $t(20.85) = 2.951$, $p = .008$, two-tailed. And there was one other striking difference between the ASD and non-ASD participants' life narratives concerning the theme of communion: both ASD groups expressed their *desire* for togetherness (communion) as a hope for the future, whereas both non-ASD groups spoke of their *experience* of it in the past.

Personal agency. Table 2 also shows Mean scores and standard deviations for the theme of personal agency and its components. Both ASD groups tended to place greater emphasis on the theme of personal agency in their life narratives than did the non-ASD groups, $t(43.18) = 1.678$, $p = .10$, two tailed, $d = .49$. More specifically, no differences were found in how all four groups discussed personal achievement/accomplishment, characterized by statements like the following: **"**I used to drive in places that were empty, with barely any traffic and no signals, […] Then I started driving on the highway […]. After that I started driving in the city. After one year of driving I was confident enough that I could drive anywhere at any time" (Interview 2, ASD Pakistan); or "I have accomplished a lot in the last couple of years. The last few years that I have been in college have been especially challenging" (Interview 32, ASD Canada).

An independent-samples *t* test found both ASD groups mentioned achievement/accomplishment significantly more often than did the non-ASD groups, $t(37.41) = 2.66$, $p = .01$, two-tailed. There we did find the mention of personal achievement/accomplishment was significantly higher in the Pakistani ASD group compared to the Pakistani non-ASD group, $t(19.90) = 2.671$, $p = .01$,

two-tailed, while there was no significant differences between the Canadian ASD and non-ASD participants.

Discussion

This study integrates McAdams and Pals' (2006) and Stern (1938)'s models of personal identity to investigate aspects of personality of individuals with autism spectrum disorder (ASD) as compared to typically non-ASD individuals living in Canada and Pakistan. According to these models, both biological human nature and culture are essential to the manifestation of dispositional traits, characteristic adaptations (expressed through values), and personal narratives that distinguish people and make their lives personally meaningful (McAdams & Pals, 2006). Implied in these models is an understanding of persons as purposeful individuals, with a multiplicity of aspects that are nevertheless united in their unique lived experience (Renner, 2010; Stern, 1938).
The following discussion grapples with these various aspects of personal identity.

Disposition

Since biological differences between ASD and Non-ASD participants are assumed in this study, based on the evidence discussed earlier (e.g., Carper et al., 2006; Edmonds, 2008; Freitag, 2007; Guo & Commons, 2017;; Herrington et al., 2017; Klin, et al., 2002; Powell, 2017), we begin our discussion with observed differences in the dispositions of both groups.

People have various attributes that figure into how they construct their personal understanding of self and identity. Cheek and colleagues (2002; also see Cheek and Cheek 2018), in their *Aspect of Identity Questionnaire* (AIQ), include four elements of identity: (1) personal, (2) social, (3) collective, and (4) relational. Our discussion of identity traits explored the four aspects of identity constructed by Cheek & colleagues (2002) and found differences between Canadian and Pakistani cultures that extended to both ASD and non-ASD members living in them.

Both Pakistani groups scored lower in *relational identity* compared to both the Canadian groups, perhaps due to Pakistanis' general reluctance to discuss intimate relations. Most participants had never been married and, in the prevailing religious atmosphere in Pakistan, expressions of intimacy are considered taboo and non-marital relationships very sinful (The Quran, 17-32; also see Baldauf, 2004; Inhorn, 2018; Jafar, 2005), unlike the situation in Canada, where people are more liberal and discussions about intimate relations are not considered taboo. Relational identity is an aspect of overall social identity (e.g., Spear, 2011; Tajfel et al., 1971) and—similar to relational identity—Canadians with ASD demonstrated more well-developed social identities than Pakistanis with ASD, perhaps due to the Canadian ASD group's intensive training in social skills (e.g., Tse et al., 2007; Waugh & Peskin, 2015). Most Canadian participants in the ASD group underwent social group therapy based on theory of mind (Baron-Cohen & Wheelwright, 2006) offered by organizations that support individuals diagnosed with ASD, such as Kerry's Place Autism Services and the Geneva Centre for Autism. Generally, in social group therapy, for example, where people with ASD learn how to interact and socialize with others (Feng et al., 2008), despite limitations in social skills, often by practicing taking the other's perspective (e.g., DSM-V, 2013; Gillberg, 1998). This social training may explain why the Canadian ASD group associated themselves with social identity traits while the Pakistani ASD group did not, since

participants in the Pakistani ASD group have no access to this kind of therapy or social skills training due to lack of funding and expertise. Even so, overall social identity was significantly lower for both ASD groups as compared to the non-ASD groups, results consistent with their clinical diagnosis of ASD (e.g., DSM-V, 2013, also see Goldstein & DeVries, 2017).

Characteristic Adaptations

Understanding people's values is crucial to understanding their characteristic adaptations because values guiding individual's life in achieving desirable goals (e.g., Hitlin, 2011; McAdams & Pals, 2006; Schwartz, 1992 & 2015).

The ASD groups from Canada and Pakistan had similar profiles for the values of conservation, openness to change, self-transcendence, and achievement, suggesting that their basic values are independent of culture and consistent with diagnostic characteristics for ASD. More specifically, both groups with ASD placed a significantly higher emphasis on conservation compared to typically developed people from Canada and Pakistan. Recall that conservation includes two sub-categories, security and conformity: *Security* endorses societal stability and *conformity* endorses respect for social norms (Schwartz, 1992 & 2015). Although studies investigating the values of people with ASD are very recent, our results are consistent with those of others using Schwartz's (1992) value scale to study people diagnosed with ASD (e.g., Hirvela & Helkama, 2011; Myyry et al., 2010).

Our study also found that both Canadian groups more highly valued openness to change than did the Pakistan groups. Recall that openness to change is understood by Schwartz (1992) in terms of three sub-categories (*self-direction, stimulation,* and *hedonism)* that concern taking independent action, excitement and challenges, and pleasure in life; all three fall under the broader category of personal values (Schwartz, 1992 & 2015). Since, Pakistani culture values togetherness, this might explain why Pakistanis (both ASD and non-ASD groups) scored lower on openness to change compared to Canadians.

Life Narratives

Several studies have underlined the centrality of communion (or togetherness) and agency (or autonomy) in the life stories of non-ASD participants (e.g., Abele & Wojciszke, 2019; Bakan, 1966; Kogler, 2012; Mansfield & McAdams, 1996; McAdams, 1980; McAdams & Pals, 2006). Narrative analysis in this study confirmed the importance of communion and agency in typically developed (non-ASD) people, and found they also characterize the life-narratives of people with ASD. However, we found a higher tendency towards endorsing the theme of communion in Pakistanis with ASD compared to Canadians with ASD, suggesting a cultural influence, even for those with a social disability. More specifically, of the five subthemes that make up the broad theme of communion (*help and care, relationship, social being, collective being,* and *contribution to society*) only *help and care* was significantly higher among Pakistanis with ASD, replicating the results of a previous study on the non-ASD Pakistani population (Khan, 2008).

Because Islam is integral to the national identity of Pakistan (Jafar, 2005; also see the constitutional laws of Pakistan, 1973), and because Zakat[5] is one of the five pillars of Islam

[5]Zakat requires Muslims to help needy people with money, or in physical and emotional ways.

(Kashif et al., 2018; Schumm & Kohler, 2006), people with ASD might have adopted the characteristic from the broader Pakistani culture; constantly seeing people helping others might incline the Pakistani ASD group to also help others as a matter of custom, not out of any deep empathy or understanding of their immediate experience. Kashif and colleagues (2018) found people in Pakistan experienced a higher level of happiness and self-protection against the realm of evil spirits after giving Zakat (i.e., giving money to needy people). In addition, most people in Pakistan live with their extended family (Avan & Akhund, 2006), a situation often requires helping others; Canadian ASD participants most often live independently, which may promote individuality and autonomy.

Furthermore, we found that while Pakistani participants more fully endorsed the theme of togetherness in their life stories than did Canadians overall, a closer look found that the non-ASD groups from both countries did not differ significantly; it was the Canadian ASD group who expressed fewer communion expressions in their life stories compared to the Pakistani ASD group.

Cultural Context

We have been highlighting cultural differences between Canada and Pakistan throughout our discussion. To review, non-ASD participants from both countries shared the same level of expressions of communion and personal agency in their life stories and valued both equally—a balance considered part of an ideal life (Bakan, 1966). However, we found two major cultural differences in the specific expression of communion. Both Pakistani groups expressed the theme of *help and care* more than the Canadian groups; counter-intuitively, the Canadian non-ASD groups placed greater emphasis on *relational identity* than did the Pakistani non-ASD, but this simply reflects kinds of questions used in this subscale that relate to intimate personal relationships.

Limitations

Due to time and funding constraints, our study was limited to investigating men with high functioning ASD and those without ASD in Canada and Pakistan, living in urban cosmopolitan cities: the Greater Toronto Area (GTA) in Canada and Karachi in Pakistan. We excluded female participants for several reasons: first, ASD is four times more prevalent in males than in female within populations, perhaps because girls are less likely to be diagnosed unless they exhibit major cognitive or behavioral difficulties. This is especially true of women with high functioning ASD in Pakistan. Due to social stigma, women are less likely to be diagnosed with any clinical diagnosis because most marriages are arranged in Pakistan, and it is difficult for parents to find a groom for their daughter if she has a clinical diagnosis. Indeed, given broader cultural expectations in Pakistan, social withdrawal in women with high functioning autism spectrum disorder would often be ignored in Pakistan: people simply considering them innocent or shy.

This point suggests a larger issue: While diagnosis of ASD in Pakistan and Canada for our study both relied on the American Psychiatric Association criteria, delivered by clinicians specializing in ASD, and in that sense may be considered universal, the possibility remains that the practice of diagnosis may differ in Pakistan and Canada; ideally. We would need a third country participating to assure that characteristics of participants with ASD, considered here to be an expression of basic biological differences, really are universal. Finally, the ASD group was

matched with the typically developed populations only by age, education and marital status, but they may differ on other parameters such as adaptive behavior skills, mental health, emotional intelligence, and family circumstances.

Conclusion

Although we found similarities between people with ASD living in two different countries, cultural upbringing clearly matters to the lived personal identity of people diagnosed with ASD. For instance, Pakistanis with ASD had the advantage of living in extended families, which might promote a feeling of togetherness; the Canadian ASD group benefited from the availability of social skills training (for example, social group therapy) that might enhance their ability to socialize, as compared to the Pakistani ASD group. Still, we find the results of our study support the model of identity proposed by McAdams and Pals (2006), as augmented by Stern (1938) in which biology and culture jointly contribute to dispositions, characteristic adaptations and life stories that give people a sense of purpose and personal identity. We hope that our study will encourage future research investigating individual differences in personal identity attuned to the joint influences of biology and culture.

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The Development of AISSEND: An Observation Tool to Assess Inclusive Practices

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Abstract

This article details the development and statistical validation of the diagnostic, observational tool Assessment of the Inclusion of Students with Special Educational Needs and Disabilities (AISSEND) designed to measure the type, frequency, and duration of inclusive practices implemented within an inclusion classroom. The goal of the research team was to develop a valid and reliable tool for measuring the inclusivity of a classroom that would be practical, reliable, and could be implemented across a school district on a large scale. Based on multiple methods of statistical analysis the AISSEND was determined to have face validity for measuring the inclusivity of a classroom.

Keywords: observation, inclusion, validation, culturally responsive instruction, inclusive practices

The Development of AISSEND: An Observation Tool to Assess Inclusive Practices

Inclusive education is one in which, "all students within a school regardless of their strengths or weaknesses, or disabilities in any area become part of the school community" (Obiakor, Harris, Rotatori, & Algozzine, 2010, p.142). Additionally, inclusion further suggests that all students should be included as valued members of the school community (Causton-Theoharis & Theoharis, 2008). Therefore, inclusion is one approach that effectively places students with disabilities and students who are culturally and linguistically diverse in general education classrooms with their peers, whilst additionally these students participate in the general education curriculum.

The importance of monitoring and increasing inclusive practices becomes increasingly more significant with the rapidly changing demographics of students in the United States. For example, 61% of school-aged students receiving special education services are in the general education (inclusion) classroom for 80-100% of the school day (Turnbull, Turnbull, Wehmeyer, and Shogren, 2016). Additionally, students who have a disability and are also culturally and linguistically diverse represent a startling 47.4% of students receiving special education services (US Department of Education, 2016) (See Table 1). Further, recognizing the presence or absence of inclusive practices is a critical measure prior to assessing the effects of inclusive practices on students with disabilities and students with disabilities who are culturally and linguistically diverse. The literature, however, is lacking a measurement instrument to appraise inclusivity of

students with mild to moderate disabilities. Previous research and measurement development in the area of inclusion have resulted in the development of the Inclusive Classroom Profile (ICP) that measures the "quality of classroom practices that support the developmental needs of children 2 to 5 years of age with disabilities in early childhood settings" (Soukakou, Winton, West, Sideris, & Rucker, 2014, p. 229). Additionally, Cushing, Carter, Clark, Wallis, and Kennedy (2009) developed and validated the Program Quality Measurement Tool (PQMT) intended to measure the implementation of research-based practices for students with severe disabilities. This research reflected an effort to link student outcomes with the level of inclusivity of a classroom; therefore, the research team needed an observational evaluation tool that could measure the type, duration, and frequency of inclusive practices that occur in an inclusion classroom. As a result, the ICP or PQMT would provide the research team with the type of data that would be useful for the overarching purpose of the research. The primary aim of the present study was to develop and validate a measure to appraise inclusivity of a classroom for students with mild to moderate disabilities; hereafter, the measure is referred to as the Assessment of the Inclusion of Students with Special Educational Needs and Disabilities (AISSEND).

Table 1
IDEA: Part B (2012) Race/Ethnicity Data for Students Receiving Special Education Services

Race/Ethnicity	Total Number	Percentage
Ages 3-5 Years	6,736,195	100%
American Indian/Alaska Native	8,577	.12%
Asian	23,082	.34%
Black or African American	102,677	1.5%
Hispanic/Latino	163,970	2.4%
Native Hawaiian or Other Pacific Islander	2,112	.03%
White (not Hispanic)	399,008	5.9%
Two or more races	36,770	.55%
Ages 6-21 Years	5,699,640	100%
American Indian/Alaska Native	84,787	1.5%
Asian	127,808	2.2%
Black or African American	1,086,471	19.1%
Hispanic/Latino	1,242,543	21.8%
Native Hawaiian or Other Pacific Islander	17,445	.3%
White (not Hispanic)	2,997,092	52.6%
Two or more races	143,494	2.5%

In response, the AISSEND was designed to assess the type, duration, and frequency of inclusive instructional practices implemented within the classroom for a combination of three groups of students with special educational needs and disabilities (SEND); (1) students with disabilities and (2) students who have a disability and are also culturally and linguistically diverse. The AISSEND is an observational diagnostic tool designed to measure the type, duration, and frequency of instructional practices implemented in an inclusive classroom. The AISSEND measures instructional practices across seven domains of inclusion including instructional materials and resources, physical environment, teacher activities, student engagement, instructional strategies, culturally responsive strategies, and classroom management strategies. The AISSEND contains descriptors across the seven domains that are written in observable terms. A trained observer using the AISSEND can conduct a 30-minute observation of an inclusive classroom and mark the presence of inclusive practices across seven domains. The observer collects data regarding the presence of inclusive practices one time for every five-

minute interval of the total observation time of 30-minutes. Therefore, the observer records the presence of inclusive practices six times over the 30-minute observation period. The AISSEND is designed to provide the educator with feedback regarding the types of inclusive practices that may be present in classroom instruction. Additionally, the educator will receive feedback regarding the frequency of use of for specific inclusive practices and, finally, the duration for which the inclusive practices are implemented. The AISSEND can provide much needed diagnostic information about inclusive classroom in direct response to the growing diversity of today's students.

This article details the development and validation of the diagnostic, observational tool, AISSEND, designed to measure the type, frequency, and duration of inclusive practices implemented within a classroom. The goal of the research was to develop a valid and reliable tool for measuring the inclusivity of a classroom that would be practical, reliable, and could be implemented across a school district on a large scale.

Method

The development of the instrument in the current investigation took place over a 10-month period and consisted of six steps which included: (1) literature search, (2) strategy identification, (3) instrument development, (4) expert analysis, (5) revision process, and (6) statistical analysis. The team consisted of one expert in special education, one doctoral student in special education, and one statistician with experience in educational statistics. A research plan was determined by the three team members, and an initial review of the literature to identify inclusive strategies was conducted as the first step in the process.

Literature Search

The first step in the process of identifying research-based strategies targeting inclusive practices was an expansive review of the literature. The literature review considered inclusion as it relates to three different classifications of students: a) students with disabilities, b) students that are culturally and linguistically diverse, and c) students that have a disability and are also culturally and linguistically diverse. Although students who are culturally and linguistically diverse do not receive special education services in accordance with IDEA (2004), instructional considerations for inclusion should be present in instruction (i.e., modeling, reference to culture in instruction, clear and consistent wording, etc.). Additionally, due to the limited amount of literature related to students with disabilities that are also culturally and linguistically diverse, the team researched instructional strategies that would be effective for students who are culturally and linguistically diverse and as a result three separate reviews of the literature were conducted. For all reviews, research databases included: Education Research Complete, Academic Search Complete, Educational Resources Information Center (ERIC), PsychARTICLES, PsychINFO, and Teacher Reference Center.

The first literature review targeted strategies to be used for students with disabilities. Using the search terms of *special education* and *inclusion* 30 articles were returned. Articles that met the following inclusion criteria were retained: a) explored inclusive practices as they relate to students with disabilities, b) explored the perspective of the student, teacher, or administrator, and c) contained at least one strategy that could be categorized within one of four principles

defining inclusion (Salend, 2011) (i.e., provide all learners with challenging, engaging and flexible general education curricula, embrace diversity and responsiveness to individual strengths and challenges, use reflective practices and differentiated instruction, and establish a community based on collaboration among teachers, students, families, other professionals, and community agencies). Of the articles, 18 were empirical and 12 were non-empirical. Due to the small number of articles, the research team read all for content and strategies.

The second literature review was designed to collect strategies that would be culturally responsive as well as inclusive. As noted earlier in this paper a large number of students who have been identified as having a disability in accordance with IDEA (2004) are also culturally and linguistically diverse. Therefore, the research team targeted strategies for students that were culturally and linguistically diverse. Students who are culturally and linguistically diverse do not have a disability as a result of diversity; however, there are research-based strategies for inclusion for students who are culturally and linguistically diverse that the research team felt might also apply to students who *do* have disabilities and are also culturally and linguistically diverse. The search terms included *culturally and linguistically diverse students* and *inclusion.* A total of 16 articles were returned in the search. All articles were reviewed and included based on the following criteria: a) explored inclusive practices as they relate to students that are culturally and linguistically diverse, b) explored the perspective of the student, teacher, or administrator, and c) contained at least one strategy that could be applied to the classroom to facilitate inclusion (Artiles & Ortiz, 2002; Dyson & Kozleski, 2008; McCray & Garcia, 2002; Salend, 2011; Taylor, 2010). The articles collected included eight empirical studies and eight non-empirical practice or position papers. The development team further added to the list of strategies that could address the Salend (2011) inclusion facilitation criteria as well as any of the additional criteria (i.e., biased assessments, practices, processes, instructional materials, and/or strategies) identified by researchers (Artiles & Ortiz, 2002; Dyson & Kozleski, 2008; McCray & Garcia, 2002; Taylor, 2010).

The final review of the literature included a cross search for instructional strategies to be used for students with disabilities that are culturally and linguistically diverse. The search terms used included *inclusion, special education,* and *culturally responsive teaching*. An additional search was conducted by replacing the phrase *culturally responsive teaching* with *culturally responsive practices.* The search returned nine articles. All articles were reviewed for content and the inclusion criteria included the following: (a) explored the use of culturally responsive teaching practices in the inclusion classroom, (b) studied the experiences of students receiving special education services that were also culturally and linguistically diverse, and (c) published in the last ten years. After the initial review one article covered disproportionality and overrepresentation of specific groups of students in special education and as a result was excluded because it did not meet inclusion criteria.

Strategy Identification

The second step in the creation of the AISSEND was the identification of strategies noted in the three separate literature reviews that could create an inclusive classroom environment. The research team used the guiding principles of Salend (2011) to guide the identification and classification of inclusive strategies. Salend (2011) states that effective inclusion of students with disabilities as well as students with disabilities who are culturally and linguistically diverse can

be achieved by providing appropriate instructional strategies to include practices that 1) adapt instruction (e.g., accommodations, modifications, visual aids, graphic organizers, activity oriented instruction, etc.), 2) adapt assignments (e.g., breaking academic tasks into smaller steps, shortening assignments, incorporating modeling, etc.), 3) teach learning skills (e.g., study skills, learning skills, test-taking skills, etc.), 4) vary instructional grouping (e.g., cooperative learning groups, heterogeneous grouping, etc.), and 5) monitor progress (e.g., assessments that help to monitor a student's progress towards their goals). The development team compiled a list of the strategies from the literature review that addressed biased assessments, practices, processes, instructional materials, and/or strategies identified by researchers determined to be cultural considerations in an inclusive classroom (Artiles & Ortiz, 2002; Dyson & Kozleski, 2008; McCray & Garcia, 2002; Taylor, 2010). All strategies identified in the review of literature were collected and compiled into a single document.

After compiling the list, the development team identified strategies that repeated, and marked them as overlapping strategies. Additionally, only strategies deemed as having the potential for observability within the classroom setting were retained.

Instrument Development

In the third step, the development team categorized the strategies. The strategies collected were grouped based on similarities into domains (See Figure 1). Once the strategies were grouped based on similar characteristics into domains of inclusion, the development team labeled each domain to include: instructional materials, physical environment, teacher activities, student engagement, instructional strategies, culturally responsive strategies, and classroom management (See Figure 1).

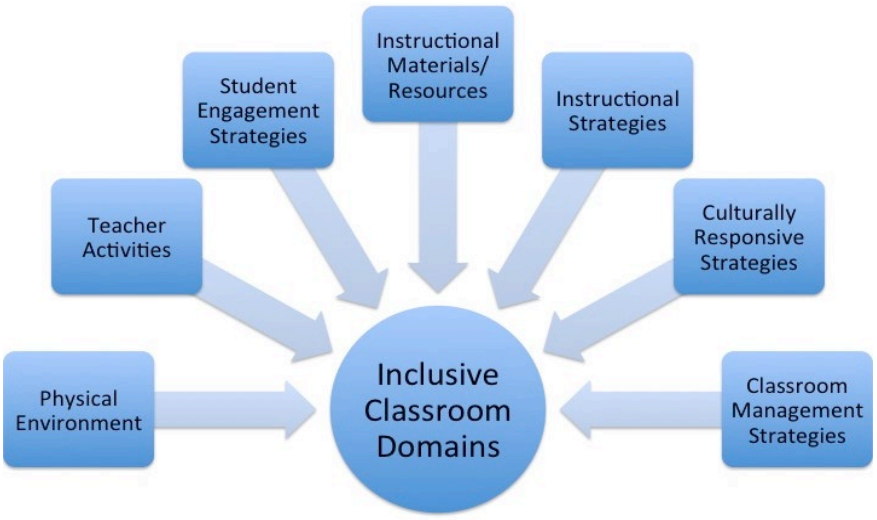

Figure 1. The Seven Domains of Inclusivity for Inclusive Classroom Instruction

The development team then composed descriptors for each strategy written in observable terms. The first draft of the observation tool was five pages in length and included seven domains and 96 descriptors. The developmental team reviewed all categories and descriptors for content and clarity prior to distributing to reliability expert reviewers.

Expert Analysis

In the fourth step, expert reviewers in the field of special education with a particular expertise in inclusion were identified to serve as reviewers for the observation tool. To be considered an expert, individuals were required to meet the criteria that included: 1) an advanced degree in the field of Special Education; 2) a minimum of 5 years of instruction experience and 3) specific expertise in inclusive education. Once individuals meeting these criteria were identified, they were contacted via email in an effort to determine their willingness to evaluate the instrument being developed. Demographics for the first group of expert reviewers can be found in Table 2. During the first phase of expert reviews inter-rater reliability was assessed. Expert reviewers were asked to assess the descriptors for observability. Raters were given a document with all 96 randomized descriptors and asked to mark the descriptors as observable (1) or non-observable (0).

Table 2

Description of Initial Expert Reviewers Providing Data Describing the Observability of the Instrument Descriptors

Reviewer	Degree Type	Gender	Age	Ethnicity	Instruction Experience
1	PhD	F	31	African American	5 years
2	PhD	F	46	Caucasian	15 years
3	PhD	F	44	Caucasian	14 years

After the descriptors were determined to be observable, the second phase of revision and analysis required experts to categorize or assign descriptors to one or more of the seven domains (i.e., Instructional Materials/Resources, Physical Environment, Teacher Activities, Student Engagement, Instructional Strategies, Culturally Responsive Strategies, and Classroom Management Strategies) to assess for factor loading. During this phase of expert reviews multiple correspondence was assessed by a second set of expert reviewers with a particular expertise in inclusion (See Table 4). Raters were given a document with all 96 descriptors randomized along the left column. Across the top row, all seven domains were randomized and listed. Expert raters were asked to mark an "x" under all domains in which the descriptor could be assigned or categorized under. The expert raters were encouraged to mark an "x" under multiple domains if the descriptor could be assigned or categorized into multiple domains. The purpose of this part of the process was to ensure that the research team had appropriately and accurately categorized the collected strategies. This step in the analysis process assisted in validating that descriptors would measure what was intended by the research team.

Table 4

Description of Expert Reviewers for interpretation of the descriptor for Multiple Correspondence Analysis (MCA)

Reviewer	Degree Type	Gender	Age	Ethnicity	Instruction Experience
1	PhD	F	41	Caucasian	21 years
2	PhD	F	29	Caucasian	7 years
3	MA	F	41	Latina	17 years

Revision Process

After the expert raters returned the first round of descriptor loading analysis, 40 descriptors from the 96 were agreed upon and kept by the development team. Of the agreements among the expert raters, eleven descriptors found agreement in more than one category. Those eleven descriptors were analyzed for language and revised to more accurately reflect the intended category. Two of the descriptors were found to be redundant and the basic principles of the descriptor were already being measured elsewhere, therefore those descriptors were discarded. For example, "teacher works with students individually" and "students allowed the opportunity for group work or individual work" were removed, but "teacher provides individual student, small group, and/or large group with feedback" and "individual student work is incorporated as an instructional strategy" "small group work is incorporated as an instructional strategy" and "large group work is incorporated as an instructional strategy" were all kept. The remaining nine descriptors were revised for language and prepared for expert review for the second round.

The revision process entered the second round with nine descriptors needing expert analysis. The nine revised descriptors were randomized and returned to experts. This second set of experts were asked to repeat the same process again as in round one and place the descriptors in all domains they felt they belonged. See demographics of second set of experts in Table 4. From this rating, four additional descriptors were agreed upon by the experts. This brought the total number of descriptors to 44. Therefore, five descriptors were revised based on expert rater feedback to further clarify the category for which they belong as well as remove bias from the descriptor language. For example, the descriptor "provides time for students to process information" continued to be identified by the experts as loading in instructional strategies (i.e., from Round 1 review) although it was intended by the development team as a *Teacher Activity*. Therefore, the descriptor was removed from the Teacher Activity domain and reassigned to *Instructional Strategy* and further reworded to state, "lesson has been chunked to allow processing time for students." The revised descriptor more adequately described an *Instructional Strategy* as opposed to a specific *Teacher Activity*, although it is related.

Round 3 of expert analysis included five, revised and randomized descriptors that were returned to the expert raters. Expert raters were asked to follow the same guidelines as the previous two rounds of the review process. After Round 3 an additional four descriptors were retained. The descriptor, "classroom included teacher work posted in accessible areas" did not reach agreement with Rater 2, with this expert placing the descriptor in Teacher Activities and also instructional materials/resources. Therefore, that descriptor was revised for clarification based on conversations with expert reviewers.

In Round 4, 49 descriptors were randomized and returned to expert reviewers. From the final round of reviews 46 descriptors (Table 3) were agreed upon by experts and those descriptors were retained for statistical analysis while the remaining three were discarded. Trials to agreement and revision are represented in Table 5.

Table 3

Table of 46 Descriptors for Statistical Analysis

Domain	Descriptors
Instructional Materials/Resources	
	Instructional materials accessible (i.e., visually and auditory
	Instructional materials support the topic/standard
	Instructional materials provided at varying levels of comprehension
	Instructional materials are culturally responsive
	Technology used in instruction
	Resource other than the textbook is used to highlight alternate cultural perspectives
Physical Environment	
	Classroom set up in manner that would allow student to navigate and obtain all lesson materials
	Tables/Desks adjusted for group work
	Tables/Desks arranged in a way that allows for easy movement
	Student work reflecting content is displayed
	Teacher work is posted in accessible areas around the classroom
	Learning environment promotes respect for other cultures
	Classroom rules are posted
Teacher Activities	
	Teacher uses a checklist, survey, or anecdotal record as an ongoing assessment tool
	Teacher attends to academic, social, and/or physical needs of students
	Teacher provides time for students to process information
Student Engagement Strategies	
	Individual student, small group, and/or large group questions asked to assess for student engagement
	Interactive activity used to engage students
	Student movement is incorporated into instruction to facilitate student engagement
	Cooperative learning incorporated for new material to facilitate student engagement
	Independent work implemented if student is familiar with the concept to retain student engagement
Instructional Strategies	
	Individual student work is incorporated as an instructional strategy
	Small group work is incorporated as an instructional strategy
	Large group work is incorporated as an instructional strategy
	Previewing strategy used
	Questioning strategy used
	Comprehension strategy used
	Instructional time is short and incorporates student questioning
	Strategy to activate prior knowledge used
	Explicit instruction used (e.g., skill breakdown, multi-sensory instruction, examples + non-examples, cueing, etc.)
	Modeling of activity used
	Practice of the activity allowed
	Instruction involves a universal theme
Culturally Responsive Strategies	
	Instruction discusses differences between individuals
	Role-playing used to accommodate for cultural differences
	Assignment or activity relates to a community or cultural group
	Opportunity to share cultural background given
	Clear and consistent wording used in instruction in consideration of English language learners
	Artifacts from other cultures are shared
Classroom Management Strategies	
	Established routines evident
	Classroom rules are enforced
	A group oriented contingency system used
	Consequence based intervention used
	Transition between activity
	Precision requests
	Planned ignoring

Table 5
Revision Table for Trials to Agreement

Domain	Trial 1 Items	T1 Items Retained	Trial 2 Items	Trial 2 Items Retained	Trial 3 Items	Trial 3 Items Retained
Physical Environment	5	3	2	1	1	-
Teacher Activities	12	3	1	-	-	-
Student Engagement Strategies	12	4	1	0	1	1
Instructional Materials/ Resources	6	4	1	0	1	1
Instructional Strategies	24	11	3	1	2	2
Culturally Responsive Strategies	18	8	1	1	0	-
Classroom Management Strategies	19	9	0	0	0	-

Statistical Analyses

Standard statistical analysis techniques for instrument development were incorporated into the evaluation of the AISSEND. As such, the design incorporated assessments designed to determine agreement between raters, as well as the manner in which instrument items loaded across various domains. All analyses were conducted utilizing SPSS 21.0.

As part of the instrument development process, inter-rater reliability for observability of descriptors was assessed. This assessment was used to determine which descriptors should be retained for the revision process and Multiple Correspondence Analysis (MCA). To analyze inter-rater reliability for observability of descriptors both percent agreement and Cohen's Kappa were calculated. For these, dichotomous rater data (0 = non-observable; 1 = observable) at the nominal level were assessed across each of the seven domains of the observation tool. A total of 96 descriptors were evaluated by expert raters and the different scores between each rater and overall were calculated. Percent agreement between raters was determined by taking the total number of agreements between raters (difference score= 0) and dividing by the total number of

items (i.e., 96 total items). Cohen's Kappa was also calculated as it has the capacity to account for the possibility of agreement as a function of random chance.

Following the assessment of inter-rater agreement for observability of descriptors and the revision process, the remaining 46 descriptors were analyzed using MCA to determine various factors within the AISSEND instrument. For this analysis all variables were multiple nominal with one set of variables. To determine the manner in which AISSEND items loaded in various domains, MCA was performed. MCA, primarily used as an exploratory technique and part of a family of descriptive methods (e.g., factor analysis, clustering, and principal component analysis), was selected as it is commonly applied to reveal hard-to-observe patterns within complex categorical-type data sets. MCA model data sets manifest as clouds in multi-dimensional space; therefore, this method for analysis can be particularly powerful as it uncovers groupings of variable categories in the dimensional spaces without needing to meet the assumptions of those required in other techniques (e.g., *G*-statistics, ratio tests, Chi-Square analysis) (Costa et al., 2013). The MCA analysis techniques used for the 46 descriptors included Cronbach's Alpha, Eigenvalues, and Percent Variance.

Results

The results of the statistical analyses included in this investigation indicated that the items were observable, there were clearly defined dimensions, and finally these dimensions were observable in congruence with the expected domains. A more detailed representation of these results follows.

Inter-rater Reliability

Percent agreement and Cohen's Kappa were utilized to assess expert ratings of the observability of the descriptors. Across the first set of three expert reviewers, overall agreement was observed to be 96.9% with the level of agreement ranging from a low of 84.2% to a high of 100.0%. Across the 7 sub-scales for which percent agreement was calculated between the raters, the classroom management strategies subscale was observed to be 0.835 while physical environment, teacher activities, student engagement materials and resources and instructional strategies sub-scales were observed to be the 1.00, the highest. All percent agreement results are displayed in Table 6.

Table 6
Kappa Coefficient Analysis for Inter-rater Reliability of Observable Descriptors

Subscale	**# of items**	**Agreements**	**KAPPA**
(1) Physical Environment	5	All agreed 100%	1.00
(2) Teacher Activities	12	All agreed 100%	1.00
(3) Student Engagement	12	All agreed 100%	1.00
(4) Materials/Resources	6	All agreed 100%	1.00

(5) Instructional Strategies	24	All agreed 100%	1.00
(6) Culturally Responsive Strategies	18	R1 and R2- 94.4% R1 and R3- 94.4% R2 and R3- 100%	R1 & R2- .941 R1 & R3- .941 R2 & R3- 1.00
(7) Classroom Management Strategies	19	R1 and R2- 84.2% R1 and R3- 84.2% R2 and R3- 100%	R1 & R2- .835 R1 & R3- .835 R2 & R3- 1.00
OVERALL AGREEMENT	96	96.88% R1 and R3- 96.88% R1 and R2- 96.88% R2 and R3 100%	R1 and 2- .95 R1 and R3- .95 R2 and R3- 1.00

In an effort to account for agreement occurring simply by chance, Cohen's Kappa was also utilized. The results of this analysis are also displayed in Table 6. Results of Cohen's Kappa calculations proved to be as strong as those results of the percent agreement analysis. Overall agreement was 96.88% between Rater 1 and Rater 3, 96.88% between Rater 1 and Rater 2, and 100% between Rater 2 and Rater 3. Overall agreement between Rater 2 and Rater 3 100%. Landis and Koch (1977) consider the interpretation of a KAPPA coefficient of .95 almost perfect agreement. ($p < .001$). See Table 6. As a result, all descriptors were determined to be written in observable terms and expert reviewer results for observability of the descriptors were likely reliable beyond random chance. The next step in the statistical analysis of the validation process for the AISSEND was to assess the 46 descriptors remaining (i.e., after the revision process) to quantify where each descriptor loaded across the seven domains identified during the literature process using MCA.

Multiple Correspondence Analysis

Dimension reduction techniques were used in an effort to quantify the sub-scales within the AISSEND. In this analysis, all variables were multiple nominal, there was only one set of variables, and the selected analysis was a multiple correspondence analysis (MCA). Projection of the item data into low-dimensional Euclidean space revealed that a total of seven features were observable across the ASSIEND data. This low-dimensional representation is displayed in Figure 2. As displayed in Table 7, the Cronbach's Alpha, Eigenvalue and Percent Variance associated with the MCA were observed to effectively identify seven dimensions within the AISSEND data. These dimensions were observed to correspond with the seven domains identified throughout the initial literature review (i.e., Physical Environment, Teacher Activities, Student Engagement, Materials/Resources, Instructional Strategies, Culturally Responsive Strategies, and Classroom Management Strategies). The results of the MCA analysis included Cronbach's Alpha, Eigenvalue Scores, and Percent Variance.

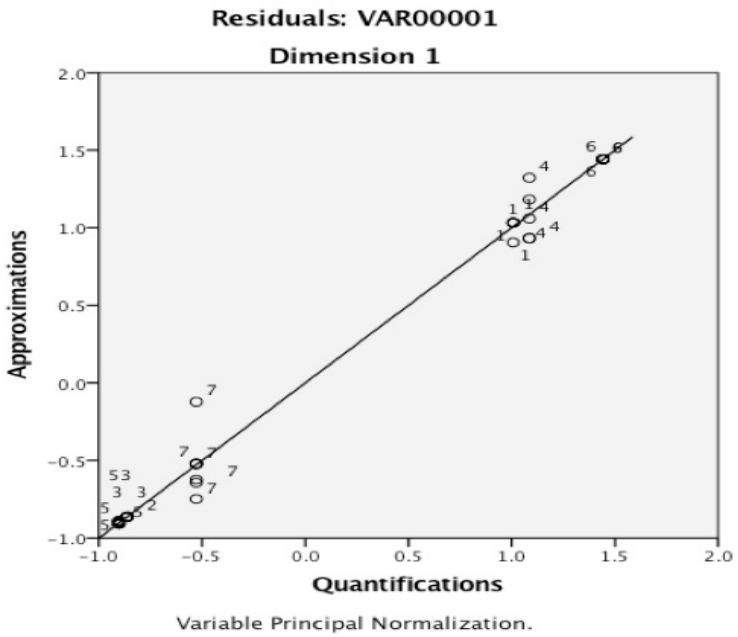

Figure 2. Eigenvalue scores and representation of Euclidean space and clusters of the seven domains

Table 7
Multiple Correspondence Analysis

Domain	Cronbach's alpha	Eigenvalue	Percent Variance
1	0.994	2.964	98.812
2	0.968	2.819	93.966
3	0.932	2.460	88.004
4	0.919	2.583	86.105
5	0.815	2.189	72.963
6	0.773	2.063	68.782
7	0.637	1.941	62.396
Mean	0.862	2.431	81.575

Cronbach's Alpha

Cronbach's alpha analysis illustrates the internal consistency element of reliability within a specific dimension, in turn indirectly indicating a measurement of the same construct. For example, the items in dimension 1 (i.e., Physical Environment) are estimated to measure that specific construct very well with a score of 0.994. Whereas, domain six (i.e., Culturally Responsive Teaching Strategies) and domain 7 (i.e., Classroom Management Strategies) were consistently difficult for raters to categorize (i.e., 0.773 and 0.637), as a result those scores were lower, comparatively (Costa et al., 2013). See Table 6. Nevertheless, the overall Cronbach's alpha score of 0.862 is indicative of a high level of internal consistency.

Eigenvalue

Eigenvalue is a scaler in a system of linear equations and designates the Euclidean space where each descriptor is located. The purpose of this analysis is to determine where items cluster together, naturally. In the case of the AISSEND, the research team aimed to have descriptors

cluster together by domain in seven distinct locations on the line (Figure 2). Related descriptors naturally cluster in space based on relationships and Eigenvalues should be greater than 1 to be identified as a scale. Domain seven (i.e., Classroom Management Strategies) has a wider cluster berth as compared to domain one (i.e., Physical Environment); therefore, the points clustering for domain one are much closer together than the points clustered for domain seven (Costa et al., 2013) (See Table 7). Nevertheless, a visual inspection of Figure 2 reveals seven separate clusters in which descriptors have naturally gathered. These results are indicative of strong relationships amongst the descriptors that group together.

Percent Variance

Percent variance explained was calculated in an effort to identify the factor(s) contributing to the variance in the statistical analysis. Percent variance explained is within the factor of each dimension and provides increased quantitative clarity related to how the descriptors cluster in a manner that explains a maximum magnitude of factor variability of 98.812% (i.e., Physical Environment) to a minimum factor variability of 62.396% (i.e., Culturally Responsive Teaching Strategies). Additionally, the total variability explained across the instrument was observed to be 81.575%. See Table 7.

Discussion

The purpose of this paper was to describe the process that the research team underwent to create the AISSEND. Additionally, the analysis described herein iterate the robust creation, revision, and statistical analysis of the tool to obtain face validity prior to using the tool to obtain observational data. Through multiple methods of statistical analysis (i.e., inter-rater reliability, Cohen's Kappa, Cronbach's Alpha, Eigenvalues, and Percent Variance) the research team has demonstrated that the instrument consists of descriptors that can be observed in a classroom environment. Additionally, the research team has created an instrument that contains seven domains with descriptors that load in the intended domain (i.e., Physical Environment, Teacher Activities, Student Engagement, Materials/Resources, Instructional Strategies, Culturally Responsive Strategies, and Classroom Management Strategies). However, this paper details the face validity of the instrument, not the construct validity.

Construct validity is the second step in the full validation of the AISSEND. Prior to measuring construct validity the research team has taken the steps to ensure that the AISSEND has been assessed and analyzed face validity to ensure that when implemented the instrument has an improved opportunity to demonstrate construct validity. Before an instrument can be implemented in the classroom setting for observational purposes, face validity is a vital component. While face validity does not indicate that the AISSEND is a valid measure of each of the proposed constructs within the domain, or in this case, the seven domains, it does suggest that the tool appears to measure the domains as intended (i.e., the observability of descriptors written to assess the seven domains of inclusion). The face validity described herein through statistical analysis (i.e., Cronbach's Alpha, Eigenvalue, Percent Variance) suggests that the AISSEND will likely measure the seven domains, as intended. Through statistical analysis, it is strongly expected that the AISSEND will accurately measure the seven domains of inclusivity (i.e., Physical Environment, Teacher Activities, Student Engagement, Materials/Resources,

Instructional Strategies, Culturally Responsive Strategies, and Classroom Management Strategies) in an inclusive classroom setting, across all grade levels and content areas.

Fortunately, the strength of the statistical analysis results for face validity suggest that the instrument may also demonstrate construct validity once tested in the classroom environment. The next step in this process will be to use the AISSEND in the classroom setting as a measure of inclusivity and test for inter-rater reliability during observations. This instrument can be deployed in an educational setting for data collection in an effort to finalize the AISSEND. Through multiple administrations of the instrument an assessment across multiple administrations can provide an additional level of reliability. Additionally, the AISSEND can be assessed for feasibility of use in an educational setting by both educators and administrators. Through this next step in the process this tool can then be assessed for construct validity improving the overall strength of the tool in providing meaningful and valid results for education professionals.

Conclusion

The AISSEND is a front and back, color-coded diagnostic observation tool that includes seven domains of inclusion and 46 descriptors. The observation time required to complete the AISSEND is 30-minutes. The 30-minute observation time is divided into five-minute intervals. The observer records a mark for each descriptor that is observed during the five-minute interval. The Assessment of Inclusion for Students with Special Educational Needs and Disabilities (AISSEND) was named in hopes that teachers would "ascend" to improved practices as related to SWDs, CLDs, and SWDs plus CLDs. The AISSEND is in response to the need for development of evidence-based practices in the area of teacher preparation as it pertains to students. The AISSEND, has now validated, is capable as serving as a needs assessment for teacher educator programs in the area of inclusive classroom instruction.

The AISSEND could potentially have a rippling effect on the field of special and cultural and linguistically diverse education. The AISSEND assesses for the presence of inclusive instructional practices in the classroom for students with disabilities and students with disabilities and are culturally and linguistically diverse. The AISSEND provides the field of education with a diagnostic observation tool that considers individualized needs of these two student types that have not yet been considered in combination. Further, specific professional development opportunities based on the seven domains (i.e., Physical Environment, Teacher Activities, Student Engagement, Materials/Resources, Instructional Strategies, Culturally Responsive Strategies, and Classroom Management Strategies) can be created in an effort to improve inclusive practices for students with a wide range of disabilities and educational needs.

The AISSEND will serve as a preliminary investigation of the type, rate, and frequency of researched based inclusive practices incorporated within inclusion classrooms. The data collected through the use of this instrument will allow for the future development of evidence-based teacher preparation protocols and interventions for future teachers that will inevitably become inclusive classroom teachers.

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Exploring Factors Related to Burnout among Special Education Teachers in Specialized Schools

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Abstract

The purpose of this initial exploratory research was to examine the extent to which burnout and turnover among special education teachers working within specialized schools were related to student maladaptive behavior (aggressive behaviors, self-injurious behaviors, and stereotypic behaviors), workplace support (from administration and colleagues), and teacher irrational beliefs. Correlational analyses indicated that all forms of student maladaptive behavior, administrative support, teacher irrational beliefs (low frustration tolerance and attitudes toward the school) were significantly related to burnout. Student self-injurious behavior and low frustration tolerance were significantly related to turnover. Teacher burnout and teacher turnover were also significantly positively correlated. Colleague support, self-downing, and authoritarian attitudes toward students were unrelated to burnout or turnover. Furthermore, no association was found between turnover and student aggression, student stereotypical behavior, and support from administration.

Keywords: special education, burnout, turnover, irrational beliefs, teachers

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Exploring Factors Related to Burnout among Special Education Teachers in Specialized Schools

Teacher burnout and teacher turnover negatively impact students' academic, behavioral, and emotional needs (Irving, 2013; Klusmann, Richter, & Ludke, 2016; McGrew, 2013; Oberle & Reichl, 2016). Special education teachers experience higher levels of burnout and turnover than general education teachers (Grant, 2017; Williams & Dikes, 2015). Subsequently, students in special education are more likely to experience negative consequences than students in general education settings. Teacher burnout has been shown to be a significant predictor of whether students in special education classes meet their IEP goals (Ruble & McGrew, 2013) and more likely to experience stress themselves (Williams & Dikes, 2015). In turn, the students who need the most help and consistency may be taught by the teachers demonstrating greater levels of stress or turnover, yet are less likely to receive the quality of support they need.

To help these students, we must first understand factors related to burnout and turnover among teachers. Research has shown that teacher burnout and turnover are related to student

misbehavior (Aloe et al., 2014; McCormick & Barnett, 2011), workplace support (Cancio, Albrecht & Johns, 2013; Langher, Caputo, & Ricci, 2017), and teacher irrational beliefs (Bermejo-Torro & Prieto-Ursula, 2006; Bernard, 2016). Although some of this research has been on special education teachers (Aloe et al., 2014; Cancio, Albrecht, & Johns, 2013), very little research has been conducted on teachers who work in specialized schools (i.e., schools that only serve students who need significantly more intensive instruction than is offered in a public school).

Student misbehavior is likely to be higher and more difficult to directly modify in these settings than students in regular education settings. Similarly, teachers likely cannot directly increase the support they receive from their colleagues or administration. Further, not every teacher in each school experiences the same levels of stress or burnout. As such it seems a more logical and effective approach might be to understand teachers' perceptions about the student behavior or the degree of support they receive may influence their stress levels.

Burnout and Turnover

Occupational burnout can be conceptualized as feeling depleted emotionally and physically to the point that one finds ways to become detached from work and their job performance diminishes significantly (Maslach, Schaufeli, & Leiter, 2001). Maslach et al. (2001) demonstrated that burnout is comprised of three constructs: Emotional Exhaustion (fatigue), Depersonalization (cynicism), and Reduced Personal Accomplishment (lower self-efficacy). Kristensen, Borritz, Villadsen, and Christensen (2005) argue that depersonalization is most likely a coping mechanism to combat the fatigue, and that reduced personal accomplishment directly results from feeling fatigued. They posit that burnout should be conceptualized as its core component of fatigue and exhaustion along with whether the individual attributes this fatigue and exhaustion to their work and/or their clientele.

As such, Kristensen et al. (2005) conceptualize burnout as three concepts: personal burnout, work burnout, and client burnout. Personal burnout captures the core concept of exhaustion or fatigue and is most like emotional exhaustion put forth by Maslach et al. (2001). Work burnout refers to the degree to which respondents attribute this fatigue as being as a direct consequence of one's work, and client burnout refers to when respondents attribute the fatigue as being direct consequence from working with one's clients. Thus, according to Kristensen et al. (2005), teachers would be considered to be burned out when they first endorse feeling extremely fatigued coupled with subsequently attributing this fatigue as resulting from either their work tasks (e.g., work burnout), from working with the students (e.g., client burnout), or from a combination of both.

Burnout and Turnover among Teachers

Burnout has been related to greater physical illness among teachers (Aloe et al., 2014; Brunsting, 2014), absenteeism (Kyraicou, 2001), and turnover (Grant, 2017; Rudow, 1999). Not surprisingly, research has shown that individuals that experience burnout are more likely to leave their jobs (Wang et al., 2016). Special education teachers have been shown to have higher burnout and turnover rates than other general education teachers (Grant, 2017; Michell & Arnold, 2004; Williams & Dikes, 2015). The term turnover may refer to a teacher resigning from his or her school, or even from the profession altogether.

Special education teachers may feel more burned out as they often have a higher workload (Williams & Dikes, 2015), and that they experience failure more often than regular education teachers which may take an emotional toll (Lindmeier, 2013). They are also more likely to experience burnout when working with students classified as emotionally disturbed (Wisniewski & Gargiulo, 1997) and having autism (Brunsting, 2014).

Turnover is also a more pressing issue among special education teachers than regular education teachers. Grant (2017) has shown that when special education teachers have more turnover when they have a broader range of students with disabilities in their classes. One-third of new special education teachers are likely to leave the profession within the first 3 years of teaching (Dillon, 2007), and especially within the first year (Grant, 2017). As special education teachers working within specialized have more students with varying disabilities and more intense needs, they may experience burnout and turnover at even higher levels than special education teachers working in general education settings.

Teacher Burnout and Impact on Students

Teacher burnout has a direct and detrimental effect on student well-being. Teachers with who experience burnout are more likely to mismanage classrooms (Brouwers & Tomic, 2000; Jennings & Greenberg, 2009), are less attentive to students (Jennings & Greenberg, 2009), use more punitive measures (Osher et al., 2007; Piekarska, 2000). They are also less likely to form close relationships with students (Osher et al., 2007) and in general value their relationships with students less (Osher et al., 2007). Irving et al. (2013) report that special education teachers who taught children with Autism were less likely to use adult language when they were more stressed. Findings by Ruble and McGrew (2013) indicate that special education teachers are less likely to adhere to interventions for their students when they are more stressed. Students are placed in specialized settings when they require more intensive support than a general education setting can provide. To provide this level of support, teachers must be capable of being attentive and adhering to academic and behavioral intervention plans. This suggests that burnout among teachers in specialized settings may be more detrimental to students' well-being than in regular education settings.

Additionally, untreated teacher stress is thought to lead to teacher burnout (Rudow, 1999). Teacher stress also increases student stress. Oberle and Reichl (2016) note that higher teacher stress predicted higher levels of the stress hormone cortisol found in their students. Thus, students of stressed teachers experience greater physiological stress than students of non-stressed

teachers. Teacher stress has been shown to be related to lessened student academic achievement as well (Klusmann, Richter, & Ludke, 2016). Students of special education teachers experiencing burnout struggle more socially, emotionally, and meet their IEP goals less often than other teachers (Jennings & Greenberg, 2009; Ruble & McGrew, 2013). Accordingly, students are negatively affected when teachers are stressed more and, as such, it is important to understand what factors are related to teacher stress. Given the findings in the literature, t is reasonable to hypothesize that student misbehavior corresponds to the degree of stress they experience. Thus, if teacher stress leads to student stress, which then increases student misbehavior; teacher stress is exacerbated even further. If we may reduce or prevent teacher stress, we can then potentially help the students achieve more academically, emotionally, and behaviorally.

Factors Related to Teacher Burnout and Turnover

Both school-based characteristics and teacher characteristics can influence teacher stress. Among school-based characteristics, student misbehavior has been shown to increase teacher burnout (Aloe et al., 2014), while perceptions of support from administration or colleagues has been shown to decrease burnout (Langher, Caputo, Ricci, 2017). Not every teacher in every school experiences the same level of stress; therefore, the role of teachers' personal characteristics also warrants further exploration.

Student Maladaptive Behavior

According to a meta-analysis by Aloe, Shisler, Norris, Nickerson, and Rinker (2014) higher levels of student misbehavior are related to higher levels of teacher burnout, but they also noted that the term 'student misbehavior' is frequently operationalized differently from study to study. McCormick and Barnett (2011) note that student misbehavior is most strongly related to burnout. According to Pepe and Addimando (2013), special education teachers are more likely to work with students who act aggressively. As such it is reasonable that students placed in more restrictive settings are more likely to show more aggressive and destructive behaviors than similar students in less restrictive settings. Interestingly, teachers' knowledge of classroom management mediates burnout and behavior (Tsouloupas et al. (2010), as cited in Brunsting, 2013), but teachers who are more burned out are less likely to effectively manage their classrooms (Brouwers & Tomic, 2000; Jennings & Greenberg, 2009). If teachers do not have the coping skills or resources to manage student maladaptive behaviors, then they are more likely to feel stressed. As teachers in specialized settings are more likely to witness maladaptive behaviors, they would likely need greater coping skills and resources.

Nistor (2013) examined the associations between both the intensity and frequency of maladaptive student behavior (student aggression, student self-injurious behavior, and student stereotypic behavior) with burnout among 20 teachers working within a specialized school in Romania. The type of behavior demonstrated by the students influenced what type of burnout the teachers experienced. Personal burnout (level of fatigue) was related to the severity of stereotypic behavior and the severity of aggressive behavior. Work burnout (attributing fatigue to one's work) was related to frequency and severity of aggression. Client burnout (attributing one's fatigue to the students) was related to the frequency and severity of self-injurious behavior. Interestingly, the more experienced teachers were less likely to believe that students had control over their own behavior which led to less burnout. In other words, teachers felt most fatigued

when faced with students that demonstrated very severe stereotypic behavior, like rocking, and very severe aggressive behaviors, like hitting others. The teachers attributed this fatigue to their job when they had students in their class that exhibited more frequent or more severe aggression. They were most likely to attribute this fatigue to working directly with the students when the students demonstrated a lot of self-injurious behavior, like self-scratching, and very severe self-injurious behavior. It would be helpful to explore these same student variables with the added variable of teacher irrational beliefs. Specifically, to what extent are teacher perceptions associated with teacher burnout levels compared to these student behaviors and teacher burnout?

Workplace Support

Within the extant literature, support from the administration is consistently negatively related to teacher stress (Langher, Caputo, & Ricci, 2017) particularly among special education teachers (Skaalvik & Skaalvik, 2007). Degree of administrative support strongly predicts employment resignation among special education teachers (Cancio, Albrecht, & Johns, 2013). However, the relationship between coworker support and burnout is inconsistent in the literature; sometimes it is helpful and other times not (Brunsting, 2014). Zabel and Zabel (2002) found that among 301 special education teachers, those that perceived their co-workers to be more supportive reported lower levels of emotional exhaustion and higher levels of personal accomplishment, but support from coworkers was unrelated to teacher depersonalization levels. As very little research has been done on teachers within specialized settings, it would be helpful to investigate the degree to which workplace support is related to these teachers' stress levels.

Irrational thinking

Lazarus and Folkman (1984) note that stress among teachers is not related to the stressors they have at work, but rather it is a result of a combination of their perceptions of those stressors coupled with their coping mechanisms. Rational Emotive Behavior Therapy (REBT) put forth by Ellis similarly suggests that situations do not lead to one's feelings, but rather one's thoughts about situations lead to their feelings (DiGiuseppe, Doyle, Dryden, & Backx, 2013). According to this theory, teachers do not experience higher levels of stress due to greater demands placed on them but as a result of their thoughts about these demands. For example, two different teachers may have the same number of students in their classes. One teacher may think that although they would *prefer* to have fewer students in their class that they can tolerate having more; whereas another teacher with the same number of students may think that it is awful that they have as many students in their class as they do and *cannot* tolerate so many students. According to this theory the first teacher may feel annoyed but may still be able to employ helpful behaviors. The second teacher, however, is likely to feel an unhealthy level of stress and may behave in self-defeating ways.

Bernard (1990) modified Ellis' irrational beliefs to construct a measure of irrationality in teachers: Teacher Irrational Belief Scale (TIBS). Included in the TIBS are the following beliefs: Self-downing (a belief that one's worth is contingent upon their ability at work and receiving approval from others), low frustration tolerance (a belief that teaching should be easier) authoritarian attitudes towards students (a belief that students should behave in a certain manner and should be punished if they do not) and attitudes to school organization a belief that teachers should be involved in running the school). Bernard found that among 792 primary and secondary teachers, that greater irrational beliefs teachers endorsed were related to greater levels of stress

among them. This finding was supported again on a sample of teachers in Australia in 2016 (Bernard, 2016). Bermejo-Torro and Prieto-Ursula (2006) used this scale to measure stress among teachers in Spain and found that low frustration tolerance and authoritarian attitudes toward students led to the most stress. Popov and Popov (2015) further found that low frustration tolerance was the strongest predictor of stress and that overall irrational beliefs partially mediated the relationship between work and stress. Therefore, it can reasonably be inferred that it is not necessarily the work environment that leads to teacher stress but rather their perceptions of the environment. Further, the more irrational beliefs they endorse the more likely they are to experience stress.

Purpose of This Study

The purpose of this initial exploratory study is to understand factors that relate to special education teacher burnout and turnover. There is evidence in the literature to substantiate the notion that burnout and turnover tend to be higher among special education teachers than general education teachers (Grant, 2017; Michell & Arnold, 2004; Williams & Dikes, 2015). When teacher burnout is high, students are less likely to meet IEP goals, are less likely to use sophisticated language, and are more likely to experience stress themselves (all of which may potentially exacerbate teacher stress too). Similarly, students clearly cannot learn from a teacher who has left the profession or school.

Factors that lead to teacher stress are often not easily amenable (e.g., student behavior, workplace support), and teachers may not be able to directly decrease student maladaptive behavior or directly increase support from their administration or co-workers. A teacher may not be able to directly change how a student behaves or how much support the administration provides, but a teacher *can* modify his or her thoughts about the students or administration. Additionally, it is likely that these factors are unpredictable on a day-to-day basis, and as a result, teachers may experience varying levels of stress dependent on what is happening around them.

While teachers may not be able to directly modify their environment, if given the proper tools they may learn how to modify their thinking thereby preventing their own stress regardless of how students, administration, or co-workers behave. This study is important, because if teachers' perceptions determine their stress levels, preventative measures can then be taken to teach teachers how to prevent their own stress. As a result, teachers would be more available to the students who would learn more.

This study is also important as it examines burnout among teachers working within specialized schools. To date, little research has been done on stress levels within this population. It is likely that students in these schools may show more maladaptive behavior, leading the teachers to need more support that may not be possible. With greater student maladaptive behavior and less support, these teachers are more likely to experience more stress and require interventions.

Hypotheses

1. Student maladaptive behavior (student aggressive behavior, student self-injurious behavior, student stereotypic behavior) as measured by the BPI-S will be positively correlated with teacher burnout as measured by CBI and will be positively correlated with teacher turnover as measured by ITQ.

2. Perceived work-related support (administrative support and colleague support) as measured by JDWH will be negatively related with teacher burnout as measured by CBI and will be negatively related with teacher turnover as measured by ITQ.

3. Teacher irrational beliefs as measured by TIBS will be positively correlated with burnout as measured by CBI and will be positively correlated with teacher turnover as measured by ITQ.

4. Teacher burnout as measured by CBI will be positively correlated with teacher turnover as measured by ITQ.

Methods

Procedure

Special education teachers were recruited through 118 specialized schools dedicated to providing services to children with special needs in New York, New Jersey, and Connecticut. Special education teachers in specialized schools were chosen for this study because research has shown that special education teachers experience greater levels of burnout and turnover (Grant, 2017; Mitchell & Arnold, 2004; Williams & Dikes, 2015) than general education teachers, and as such stress among these teachers is important to understand. One hundred eighteen principals of out-of-district schools were forwarded a description of the study and a copy of the consent form that would eventually be given to teachers and were asked for permission to collect data within their schools, and 6 chose to participate. Starting in October of the school year, a recruitment email directed to the teachers was sent to principals of approved settings to forward to the teachers in their school. The study remained open until June of the same academic year. Additionally, schools were provided with a flyer to post in the teachers' lounge. Participants were provided with an opportunity to enter a raffle to win a $20 e-gift card to Amazon. One in 20 participants received the e-gift card. A brief write-up of the key study findings was sent to all participants as well.

Participants

All special education teachers within this sample worked within specialized schools dedicated to providing services to students with special needs. The majority of the sample was female (92.0%; $n = 23$) and was aged between 20 and 29 years (36.0%; $n = 9$). Most of the sample had a master's degree with less than 30 additional credits (52%; n=13), had 5 years or less of experience (44%; n=11). The number of students per class ranged from 6-12 and the average number of adults helping in their classes ranged from 1-10. Only 8% ($n = 2$) of the teachers reported having a homogenous class where all students had the same classification; the rest of the teachers listed multiple classifications for the students in their class. Similarly, 72% ($n = 18$) of the teachers reported working with children of only one age group, whereas the rest of teachers reported working with children within multiple age-ranges. The frequencies and percentages of the demographic variables are provided in Table 1.

Table 1.
Demographic Characteristics of Participants

Feature	*n*	%
Gender		
Male	2	8.0
Female	23	92.0
Age		
20-29	9	36.0
30-39	8	32.0
40-49	4	16.0
50-59	3	12.0
60-69	1	4.0
Education		
Bachelors degree with less than 30 additional credits	1	4.0
Masters degree with less than 30 additional credits	13	52.0
Masters degree with more than 30 additional credits	11	44.0
Special Ed Certificate	25	100.0

Table 1 (continued).

Years' Experience		
5 years or less	11	44.0
6-10 years	6	24.0
11-15 years	3	12.0
16-20 years	1	4.0
21 years or more	4	16.0
Students		
Autism	24	96.0
Deaf-blindness	5	20.0
Deafness	4	16
Dev delay	18	72
Emotional Disturbance	9	36
Hearing Impairment	9	36
Intellectual Disability	19	76
Multiple Disabilities	22	88
Orthopedic Impairment	9	36
Specific Learning Disability	6	24
Traumatic Brain Injury	5	20
Visual Impairment	11	44
Other heath impaired	13	52

Table 1 (continued).

Professional Focus		
Ages 5-11	10	40
Ages 11-14	10	40
Ages 14-18	7	28
Ages 18-21	6	24
Other	1	4

Sample Size and Missing Data

Although 27 teachers completed the surveys, two cases were excluded from the analyses as the respondents did not complete the items necessary for calculating the student behavior scales. Approximately 11% of the data were missing; Little MCAR test results suggest that the data were missing at random (X^2= 29.27; df = 35; p = .74). Median substitution was used for missing data.

Measures

Burnout. The Copenhagen Burnout Inventory was designed by Kristensen et al., (2005) to measure burnout among human service professionals. The measure consists of 19 items assessing the frequency or rate with which employees experience the statements on a five-point scale (1=Never/Almost Never; 5=Always) and (1=To a very low degree; 5 = To a very high degree) respectively. Burnout is measured by assessing three separate constructs: personal burnout, work burnout, and client burnout. Personal burnout refers to how fatigued and emotionally depleted an individual feels (Kristensen, 2005). Work burnout refers to the degree to which respondents attribute feeling fatigued and exhausted to their work, and client burnout refers to the degree to which respondents attribute feeling fatigued and exhausted to working with clients (Kristensen, 2005). Each subscale is measured by summing the responses with higher scores on each of the subscales reflect more severe burnout. According to a study by Nestor, A. (2013) on 20 special education teachers working within special education schools in Romania, internal consistency alphas ranged from .61-.88, and test-retest coefficients were between .80 and .85.

Turnover. The Intent to Quit Scale was designed by Bradley (2007) assessing the degree to which individuals think about leaving their school, their job, and their career. It consists of 3 items that assess intent to quit on a 5-point Likert scale (1= strongly disagree, 5= strongly agree). Responses on the items are summed to create one score in which higher scores reflect a greater intent to quit. Sass, Seal, and Martin (2011) achieved a Chronbach's alpha of .73.

Student Maladaptive Behavior. The Student Behavior Short Form was designed by Rojahn et al. (2001), measure the frequency and severity of maladaptive behaviors among an individual with special needs. The measure consists of 30 items assessing the frequency of a list of behaviors (1=Monthly; 4=Hourly) and the severity of the same behavior (1=Mild; 3=Severe). The measure consists of 5 subscales Self-Injurious Behavior – frequency, Self-Injurious Behavior- severity, Aggressive/Destructive Behavior – frequency, Aggressive/Destructive Behavior- severity, and Stereotypic Behavior - frequency. For the purposes of this study, teachers completed the measure for each of the students in their class. An average was calculated for each subscale based on the sum of the teachers' responses divided by how many students they

have in their class. Higher scores on each of the subscales reflect either more frequent or more severe demonstrations of the behavior. According to a study by Nistor (2013) Cronbach's alphas ranged from .82-.91.

Administrative and colleague support. The Job Demands Worker Health was designed by Caplan et al. (1975) to teacher perceptions of support from administration and colleagues. The measure consists of 8 items assessing the frequency with which employees experience the statements on a four-point scale (1 = Not at all; 4 = Very Much). Support is measured by assessing two separate constructs: Administrative Support and Colleague Support. Each scale is calculated by summing the responses where higher scores on each of the subscales reflect more perceived support. Sass, Seal, and Martin (2011) found Cronbach's alphas of .93 for both subscales.

Irrational beliefs. The Teacher Irrational Belief Scale was designed by Bernard in 1990, and it assesses the degree to which teachers endorse irrational beliefs related to teaching. The scale consists of 22 items that use a 5-point Likert scale (1= Strongly Disagree; 5= Strongly Agree). Items correspond to 4 separate scales: Low Frustration Tolerance (a belief that teaching should be easier), Self-downing (a belief that one's worth is contingent upon their ability at work and receiving approval from others), Authoritarian Attitudes toward Students (a belief that students should behave in a certain manner and should be punished if they do not), and Attitude of Running the school (a belief that teachers should be involved in running the school). Items for each scale are summed, and the greater sums indicate a greater degree of irrational thinking. Research by Calvete and Villa (1999) using this scale resulted in Chronbach's alphas ranging from .71-.74 (as cited in Bermejo-Torro & Prieto-Ursúa, 2006).

Data Analysis

Pearson's r correlations were conducted to analyze the associations between teacher burnout and between teacher turnover with the following variables: student aggression, student self-injurious behavior, student stereotypic behavior, administrative support, colleague support, student, and teacher irrational beliefs. Pearson's r correlations were conducted to analyze the associations between burnout and turnover.

Results

All data were analyzed using the IBM SPSS Statistics, version 25. Descriptive information on measures are provided in Table 2.

Table 2
Psychometric Properties of Scales

				Range			
	M	*SD*	*a*	Potential	Actual	Skew	Kurtosis
CBI PB	54.33	17.57	.87	.00-600.00	12.50-87.50	-.35	.31

CBI WB	51.00	18.37	.88	.00-700.00	7.14-85.71	-.47	.90
CBI CB	28.33	16.40	.69	.00-600.00	.00-54.17	.01	-1.23
ITQ	8.67	3.09	.71	3.00-15.00	3.00-13.00	-.63	-.82
BPI SIB FREQ	2.56	2.18	-.27	.00-32.00	.00-9.00	1.28	1.63
BPI SIB SEV	1.61	1.29	-.20	.00-16.00	.00-4.29	.75	-.56
BPI AGG FREQ	4.99	4.56	.78	.00-40.00	.00-16.43	.98	.16
BPI AGG SEV	3.52	3.38	.82	.00-30.00	.25-13	1.39	1.52
BPI STER FREQ	4.17	2.73	.94	.00-12.00	.71-11.71	.95	.99
JDWH ADMIN	11.22	3.49	.92	4.00-16.00	5.00-16.00	.06	-1.29
JDWH CO	12.17	3.13	.88	4.00-16.00	5.00-16.00	-.71	-.35
TIBS: LFT	13.84	3.72	.77	.00-20.00	7.00-20.00	-.29	-.48
TIBS: SD	22.58	4.39	.67	.00-40.00	15.00-30.00	-.22	-.80
TIBS: Students	9.43	2.12	.44	.00-25.00	5.00-14.00	.27	.41
TIBS: Organization	18.64	3.67	.72	.00-25.00	11.00-25.00	-.17	-.49

Note: CBI = Copenhagen Burnout Inventory, ITQ = Intent to Quit, BPI = Behavior Problems Inventory –Short Form, JDWH = Job Demands Worker Health, TIBS = Teacher Irrational Beliefs Scale

The Copenhagen Burnout Inventory (CBI). The CBI (Kristensen et al., 2005) is a self-report measure of burnout among educators. The measure consists of three subscales: Personal Burnout, Work Burnout, and Client Burnout. There is no current normative information for this measure**;** however clinical levels of burnout are considered to be 50 points or more (Kristensen et al., 2005). Within this sample 76% of the clients experienced clinical levels of personal burnout, 60% reported clinical levels of work burnout, and 16% reported clinical levels of client burnout. These findings suggest that this sample seemed to have elevated stress related to their overall well-being and that they attributed to their job, but interestingly only a small portion perceived the stress to be related from working with the children. Overall the Copenhagen Burnout Inventory had Cronbach's alpha coefficients ranging from .69 -.87 indicating that it is a reliable measure.

The Intent to Quit Scale (ITQ). The ITQ (Bradley, 2007) is a self-report measure of turnover among employees. The measure consists of 1 scale in which higher scores reflect a greater desire

to quit their job. Overall the ITQ was fairly reliable with a Cronbach's alpha coefficient of .71. There is currently no normative information for this measure.

Behavior Problems Inventory- Short Form. The teachers completed the BPI-S on each student in their class. The teachers were asked how frequently the student demonstrated specific aggressive (e.g., hitting others), self-injurious (e.g., self-scratching), and stereotypic (e.g., rocking) behaviors as well as the how severe the same aggressive and self-injurious behaviors were. Response options ranged from (1=Never – 4= Hourly) for frequency-related questions and from (1= Mild- 3= Severe) for severity-related questions. Data on the severity of stereotypic behaviors was not collected. Subscales were created for the frequency of aggression, frequency of self-injurious behaviors, frequency of stereotypic behaviors, severity of aggressive behaviors, and severity of self-injurious behaviors. An average was calculated for each subscale based on the sum of the teachers' responses for each child divided by how many students they have in their class. Higher scores on each of the subscales reflect more frequent or more severe demonstrations of the behavior within a classroom. Cronbach's alphas ranged from .78-.94 for the aggression scales and stereotypic behaviors scale indicating that it is generally reliable, although alpha values in excess of .90 may indicate that some items are redundant. The self-injurious behaviors scale returned a Cronbach's alpha of -.27 and -.20 for the frequency and severity scales respectively. The negative alpha may be attributable to the small sample size and should therefore be interpreted with caution. There are currently no normative data on this measure.

The Job Demands Worker Health. The JDWH (Caplan et al., 1975) is a self-report measure of perceived support from administration and colleagues and represent two separate subscales. Each subscale is measured by summing the responses, and higher scores reflect greater perceived support. The internal consistencies for this sample were as follows: administrative support (α =.92), colleague support (α=.88). This is considered to be a reliable measure, although the high alpha values may indicate some item redundancy. There is currently no normative data on this measure.

Teacher Irrational Beliefs Scale (TIBS). The TIBS (Bernard, 1990) is a self-report measure used to assess teacher irrational thinking. Four separate subscales are measured: Low Frustration Tolerance, Authoritarian Attitudes Toward Students, Attitudes Toward School Organization, and Self Downing. Each subscale is measured by summing the responses provided for the items, and for each scale higher scores reflect higher irrational thinking. The Cronbach's alphas for this sample were as follows: Low Frustration Tolerance (α =.77), Authoritarian attitudes towards students (α =.44), attitudes toward school organization (α =.72), and Self Downing (α =.67).

Student Maladaptive Behavior, Teacher Burnout, and Teacher Turnover

Aggression and Teacher Burnout. Consistent with the hypothesis, both the frequency and severity student aggression were significantly and positively correlated with teacher fatigue and teacher's attribution of this fatigue of being related to their work: personal burnout (frequency: $r(25) = .47$, $p<.05$; severity: $r(25) = .53$, $p<.05$), and work burnout (frequency: $r(25) =.48$, $p<.01$; severity $r(25) =.43$, $p<.01$). Interestingly neither the frequency nor the severity of aggression were significantly related to client burnout ($r(25) = .22$, $p=.15$; $r(25) = .18$, $p=.19$, respectively). These results indicate that greater student aggression and more severe aggression is related to

greater teacher fatigue and a stronger likelihood of teachers attributing this fatigue to their work. The aggression is unrelated to teachers perceiving their fatigue as coming from the students. The correlation coefficients can be found in Table 3.

Table 3
Correlation Coefficients between Student Maladaptive Behavior, Work-Place Support, Irrational Beliefs with Teacher Burnout

	CBI PB	CBI WB	CBI CB
Student Maladaptive Behavior			
Self-Injurious Behavior - Frequency	.41**	.37**	.28
Self-Injurious Behavior – Severity	.46**	.42**	.13
Aggressive Behavior - Frequency	.47*	.48**	.22
Aggressive Behavior - Severity	.53**	.43**	.18
Stereotypic Behavior - Frequency	.54*	.42**	.10
Work Place Support			
Administrative Support	-.50**	-.56**	-.35*
Colleague Support	-.12	-.07	-.05
Teacher Irrational Beliefs			
Self-Downing	.28	.23	.20
LFT	.53**	.50**	.48*
Attitude to School	.34*	.25	.34*
Authoritarian Attitude	-.08	-.10	.32

*p <.05, **p<.01 *Note: CBI = Copenhagen Burnout Inventory*

Aggression and Teacher Turnover. Inconsistent with the hypothesis, neither the frequency of aggression nor the severity of aggression were found to be related to turnover (frequency: $r(25) = .27$, $p = .20$; severity: $r(25) = .22$, $p = .30$). These results indicate that the amount or severity of aggression demonstrated by students is unrelated to whether or not teachers think about leaving their job. The correlation coefficients can be found in Table 4.

Table 4
Correlation Coefficients between Student Maladaptive Behavior, Work-Place Support, Irrational Beliefs with Teacher Turnover

Scale	ITQ
Student Maladaptive Behavior	
Self-Injurious Behavior - Frequency	.47*
Self-Injurious Behavior – Severity	.49*
Aggressive Behavior - Frequency	.27
Aggressive Behavior - Severity	.20
Stereotypic Behavior - Frequency	.15
Workplace Support	
Administrative Support	-.40
Colleague Support	-.19
Irrational Beliefs	
Self-Downing	.21
LFT	.48**

Attitude to School	.34
Authoritarian Attitude	-.01

**p <.05, **p<.01. Note: ITQ – Intent to Quit*

Student Self-Injurious Behaviors and Teacher Burnout. Consistent with the hypothesis, both the frequency and severity of student self-injurious behavior were significantly and positively correlated with personal burnout [frequency: $r(25) = .41$, $p<.01$, severity: $r(25) = .46$, $p<.01$] and work burnout [frequency: $r(25) =.37$, $p<.01$, severity: $r(25) =.42$, $p<.01$]. Interestingly neither the frequency nor the severity of self-injurious behavior were related to client burnout ($r(25) = .28$, $p=.09$, $r(25) = .13$, $p=.27$, respectively). These results indicate that more frequent and more severe self-injurious behaviors are associated with greater fatigue experienced by the teachers and the greater likelihood that teachers will attribute this fatigue to their work. The correlation coefficients can be found in Table 3.

Student Self-Injurious Behaviors and Teacher Turnover. Consistent with the hypothesis, both the frequency and severity of student self-injurious behavior were significantly and positively correlated with turnover [frequency: $r(25) = .47$, $p<.05$, severity: $r(25) = .49$, $p<.05$].These results indicate that greater and more severe self-injurious behaviors are associated with a greater desire for teachers to leave their job. The correlation coefficients can be found in Table 4.

Student Stereotyped Behavior and Teacher Burnout. Consistent with the hypothesis, stereotyped behavior was positively associated with teacher stress. The frequency of student stereotyped behavior was significantly positively associated with personal burnout: $r(25) = .54$, $p<.05$ and work burnout: $r(25) =.42$, $p<.01$. Once again the frequency of self-injurious behavior were not associated with client burnout ($r(25) = .10$, $p=.31$). These results indicate that the more often students demonstrate stereotypical behavior is associated with greater fatigue experienced by the teacher as well as to greater attribution of this fatigue to their work. The correlation coefficients can be found in Table 3.

Student Stereotyped Behavior and Teacher Turnover. Inconsistent with the hypothesis, stereotyped behavior was not associated with turnover ($r(25) = .15$, $p=.50$). This result indicates that the more often students demonstrate stereotypical behavior is not associated with a teachers' desire to leave their job. The correlation coefficients can be found in Table 4.

Exploratory Analyses. For each maladaptive behavior, frequency and severity, the maximum responses for each item in each scale were averaged together. Correlational analyses were conducted with burnout and turnover, and with the exception of frequency of stereotypic behavior, the same results were found. The maximum frequency average stereotypic behavior was not associated with any burnout or turnover measure (Personal Burnout: $r(25) = .28$, $p=.01$; Work Burnout: $r(25) = .12$, $p=.29$; Client Burnout: $r(25) = .15$, $p=.24$; Turnover: $r(25) = .14$, $p=.26$. Taken together, these findings indicate that the number of students who exhibit frequent or severe self-injurious behavior is impertinent in determining teacher burnout. Contrary, teachers with a few students with very frequent stereotypic behavior is less likely to be associated with burnout than if the teachers have a group of students with frequent stereotypic behavior. These results can be seen in Table 5.

Table 5
Correlation Coefficients between Student Maximum Maladaptive Behavior, Teacher Burnout Teacher Turnover

Maximum Average Student Maladaptive Behavior	CBI PB	CBI WB	CB CB	ITQ
Self-Injurious Behavior - Frequency	.47**	.43*	.13	.49**
Self-Injurious Behavior – Severity	.49**	.44*	-.03	.48**
Aggressive Behavior - Frequency	.40*	.44*	.20	.23
Aggressive Behavior - Severity	.45*	.46*	.11	.14
Stereotypic Behavior - Frequency	.28	.29	.15	.14

Workplace Support, Burnout, and Turnover

Administrative Support and Teacher Burnout. A Pearson r correlation was calculated to examine the association between administrative with teacher burnout. Consistent with the hypothesis, administrative support was significantly negatively associated with teacher stress (personal burnout: $r(25) = -.50$, $p<.01$, work burnout, $r(25) = -.56$, $p<.01$, and client burnout, $r(25)= -.35$, $p<.05$.) These results indicate that greater perceived support from the administration is associated with lower teacher fatigue. Interestingly greater perceived support from the administration is also associated with less of a likelihood that teachers will attribute this fatigue to either their work or their work with students. The correlation coefficients can be found in Table 3.

Administrative Support and Teacher Turnover. A Pearson r correlation was calculated to examine the association between perceived support from administration with teacher turnover. Inconsistent with the hypothesis, administrative support was not associated with teacher turnover ($r(25) = -.40$, $p=.06$). This result indicates that greater perceived support from the administration is not associated with teachers' desire to leave their job. The correlation coefficients can be found in Table 4.

Colleague Support and Teacher Burnout. A Pearson r correlation was calculated to examine the association between colleague support with teacher burnout. Contrary with the hypothesis, however, colleague support was not associated with any form of teacher burnout ($p=.33$, personal burnout: $r(25) = -.12$, $p=.28$, work burnout, $r(25) = -.07$, $p=.37$, and client burnout, $r(25)= -.05$, $p=.413$.) These results indicate that the degree of support perceived from colleagues is not associated with teacher burnout. The correlation coefficients can be found in Table 3.

Colleague Support and Teacher Turnover. A Pearson r correlation was calculated to examine the association between perceived support from colleagues with teacher turnover. Inconsistent with the hypothesis, colleague support was not associated with teacher turnover ($r(25) = -.19$, $p=.37$). This result indicates that greater perceived support from the colleagues is not associated with teachers' desire to leave their job. The correlation coefficients can be found in Table 4.

Qualitative Analyses Administration. Participants were asked to complete the following sentences: "*I feel most supported by my administration when they…"* and "*I would feel more supported by my administration if they…*" A series of patterns emerged that demonstrated a need for professional validation and guidance. Teachers wrote that they feel most supported when their administration provides strategies on how to perform their job better (35%; $n=7$) and then to

acknowledge their hard work (25%, *n*=5). Teachers also suggested that they feel most supported when their administration comes to their classroom (20%, *n*=4), implements strategies that staff suggests (20%, *n*=4), and follows through on tasks or responds to emails and requests (20%, *n*=4). Teachers demonstrated a preference for administration to come to their classrooms more (35%, *n*=6), provide more communication, specifically positive communication (29%, *n*=5), and validate their hard work (18%, *n*=3). These results can be seen in Table 6.

Table 6
Qualitative Responses to Questions on Administrative Support

Item/Response	*n*	*%*
What does your administration do that leads you to feel supported?		
Provide feedback on how to do things better/professional development	*7*	*35%*
Acknowledge/validate hard work	*5*	*25%*
Be in the classroom more/active/present	*4*	*20%*
Follow through on tasks/ respond to requests/emails	*4*	*20%*
Listen to staff and implement strategies suggested	*4*	*20%*
Back them up	*3*	*15%*
Communicate with parents	*1*	*5%*
Extend deadlines	*1*	*5%*
What do you wish your administration would do to help you to feel more supported?		
Come in classroom/more direct contact	*6*	*35%*
More communication/more positive communication	*5*	*29%*
Show empathy/recognize hard work	*3*	*18%*
Money	*2*	*12%*
Ask how they can help/for input	*2*	*12%*
Professional development	*1*	*6%*
Limit challenges/Provide resources	*1*	*6%*
Follow through	*1*	*6%*

Qualitative Findings. Participants responded to open-ended questions about their co-workers. Teachers wrote that they felt most supported by their co-workers when tasks were completed on time and correctly without having to ask (57%, *n*=12), and when their feelings were validated (48%, *n*=10). Similarly, when asked what their coworkers could do to help them feel supported, teachers reported that they would like them to understand what needs to be done (27%, *n*=3), be more positive and open to new ideas (27%, *n*=3), and be willing to work together (18%, *n*=2). These findings can be seen in Table 7.

Table 7
Qualitative Responses to Questions on Colleague Support

Item/Response	*n*	*%*
What do your co-workers do that lead you to feel supported?		
Do what needs to be done/without being asked/follow through on tasks/ Run class the way I like	12	57%
Listen/Validate feelings	10	48%

What do you wish your co-workers would do to help you to feel more supported?		
Be more positive/open to new ideas	3	27%
Understand what needs to be done	3	27%
Be more willing to work together	2	18%
Age divide	1	9%
"less work stress"	1	9%

Irrational Beliefs, Burnout, and Turnover

Teacher Irrational Beliefs and Teacher Burnout. A Pearson r correlation was calculated to examine the association between teacher irrational beliefs with teacher burnout. Low Frustration Tolerance was significantly positively related with all forms of burnout as well: personal burnout, r (25) = .53, p<.01, work burnout, r (25)= .50, p<.01, and client burnout r(25) = .48, p<.05. Attitudes toward the organization was significantly positively associated with personal burnout, r (25) = .34, p<.05, client burnout, r (25)= .34, p<.05, but not work burnout (r(25) = .25, p=.11). Self-downing was not associated with personal burnout, r (25) = .28, p=.09, work burnout, r (25)= .23, p=.13, and client burnout (r(25) = .20, p=.17). Authoritarian attitudes towards students were not associated with personal burnout, r (25)=-.08, p=.34, client burnout r (25)=.32, p=.06, or work burnout, r(25)=-.10, p=.31. Thus, lower frustration tolerance among teachers is associated with greater teacher fatigue, and it is associated with a greater likelihood of a teacher attributing this fatigue to either work or to work with students. The more a teacher believes that the school should operate in a certain way, the greater the fatigue experienced by the teacher and the greater the likelihood that the teacher will attribute this fatigue to working with students. Interestingly the greater demands teachers place on either themselves or students is not associated with the teacher fatigue or attributions for fatigue. The correlation coefficients for these analyses can be found in Table 3.

Teacher Irrational Beliefs and Teacher Turnover. A Pearson r correlation was calculated to examine the association between teacher irrational beliefs with teacher turnover. Low Frustration Tolerance was significantly positively related with teacher turnover (r (25) = .48, p<.01). All other beliefs were not associated with to turnover (Attitudes toward the organization: r(25)= .34, p=.11; authoritarian attitudes towards students: r (25) = -.01, p=.96; self-downing: r (25) = .21, p=.33.These results indicate that the greater low frustration tolerance a teacher endorses is associated with a greater desire to leave one's job. However, the greater expectations teachers place upon students, organization, or themselves is not associated with their desire to leave their job. The correlation coefficients can be found in Table 4.

Teacher Burnout and Teacher Turnover

A Pearson r correlation was calculated to examine the association between teacher burnout and teacher turnover. Consistent with the hypothesis all forms of burnout were significantly positively associated with teacher turnover [personal burnout r(25) = .55, p<.01; work burnout: r(25) =.55, p<.01; client burnout: r(25) =.45, p<.05. These results indicate that the greater fatigue and exhaustion a teacher experiences are associated with a greater desire to leave one's job. Similarly, the greater a teacher attributes this fatigue to be a result of their job or of working with

students are both associated with a greater desire to leave one's job. The correlation coefficients can be found in Table 8.

Table 8
Correlation Coefficients between Teacher Burnout with Teacher Turnover

Scale	Turnover
Personal Burnout	.55**
Work Burnout	.55**
Client Burnout	.45*

*p <.05, **p<.01

Discussion

The purpose of this study was to examine factors associated with teacher burnout and teacher turnover among special education teachers working in specialized schools. As expected, student behavior (self-injurious behavior, aggressive behavior, and stereotypic behavior), administrative support, and teacher irrational beliefs were all associated with both burnout and turnover. Support from colleagues was not associated with burnout or turnover.

Discussion of Sample and Review of Measures

Although 118 principals of out-of-district schools in New York, New Jersey, and Connecticut were contacted, only principals from 6 schools chose to participate. As the participants were recruited specifically from specialized schools, all teachers had their bachelor's degree and special education certificate, and 96% earned master's degrees. Only 8% (n=2) teachers taught homogenous classes where all students had the same classification; whereas most of the participants' students had a wide range of classifications.

Most measures could be considered reliable as they had internal consistencies equal or greater to .71. Scale scores that should be interpreted with caution include self-downing (α = .67) and authoritarian attitudes toward students' belief (α =.44). Scales that should be interpreted with extreme caution include frequency of self-injury (α =-.27) and severity of self-injury (α =-.20) scales. These lower internal consistencies were most likely a result of the small sample size. Additionally, these scales were measured at the ordinal level, thereby rendering Cronbach's alpha a less accurate indicator of reliability. In future research with larger sample sizes, we plan to evaluate the reliability of these scales via categorical principal components analysis (CATPCA), which will yield Cohen's weighted kappa (Fleiss & Cohen, 1973; Fleiss, Levin, & Paik, 2003).

Discussion of Hypotheses

Student Maladaptive Behavior, Teacher Burnout, and Teacher Turnover. All forms of student maladaptive behavior (i.e., self-injurious behavior, aggressive behavior, and stereotypic behavior) were associated with greater levels of fatigue experienced by the teachers. Similarly, these behaviors were more likely to be associated with teachers believing that the fatigue they were experiencing was a direct result from their work in general. These findings are consistent

with previous research that showed that student maladaptive behavior was associated with greater burnout among teachers (Aloe et al., 2014).

Interestingly, student maladaptive behavior of any kind was not associated with teachers' perceptions that their fatigue was a result of working with students. That is teachers did not believe feeling fatigued was a result of working directly with the students. Perhaps this finding is unique to the sample of teachers that choose to work within specialized schools. Nistor (2013) found that years of teaching experience was significantly negatively correlated with believing that the students had control over their behavior and as a result experienced less burnout. Thus, the more experience teachers had was negatively correlated with believing that the student can control his or her behavior, and as such, they were less likely to experience burnout. It is possible that teachers who choose to work with students with significant challenges are generally less likely to attribute the cause of their negative feelings to working with the students and instead to the work in general.

Among student maladaptive behavior, only self-injurious behavior was associated with teachers' desires to leave their job; neither aggression nor stereotypic behavior were associated with turnover. Further research would be warranted to first replicate this finding and second explore the reasons for why this might be. It is likely that this finding is the result of a very small sample size or perhaps the specificity of the sample. It might be possible that different types of student maladaptive behavior elicit different emotions in teachers, and that self-injurious behaviors elicit an emotion that subsequently evokes a greater desire to leave the position. Future research should explore this association.

Workplace Support, Teacher Burnout, and Teacher Turnover. Greater perceived support from the administration was associated with less fatigue endorsed by the teachers. This support from the administration was also associated with less likelihood that any fatigue experienced was a result of their job or also from working with the students. That is, teachers who believed their administration provided them with more support were less likely to feel fatigued, and they were less likely to believe that their fatigue was a result of their job or from working with the students. These findings are consistent with previous research that indicate that support from the administration serves as protection from stress (Skaalvik & Skaalvik, 2007).

Contrary to the hypotheses, support from the administration was unassociated with whether teachers considered leaving their job. This could be a result of having a very small sample size. Also, it is possible that teachers working within specialized settings feel a greater attachment to the students and as a result less likely to want to leave their position.

Perceived support from colleagues was not associated with either burnout or turnover. Research on teacher stress and turnover as it relates to colleague support has been inconsistent (Brunsting, 2014). This finding is similar to research that found that contrary to what one might expect support from colleagues was not associated with depersonalization (Zabel & Zabel, 2002), or it could be a result of a very small sample size.

It should be noted that burnout is not uncommon among early career teaching professionals (e.g., Goddard & Goddard, 2006; Goddard, O'Brien, & Goddard, 2006; Schaefer, Long, & Clandinin,

2012). However, the sample itself was unique in that the teachers surveyed were generally quite young (most were under 30). This represents a unique segment of the population as some literature suggests that young adults may be more prone to job burnout than older employees (e.g., Luyckx, Duriez, Klimstra, & De Witte, 2010). Therefore, the findings of this research should be considered within the context of the sample used.

Teacher Irrational Beliefs, Teacher Burnout, and Teacher Turnover. Among teacher irrational beliefs, low frustration tolerance was most associated with both burnout and turnover. That is, teachers who were more likely to think that they "cannot stand it" when faced with an aversive stressor were more likely to endorse feelings of fatigue and attribute this fatigue to their work in general and also their work with students. Teachers who were more likely to think along these lines way also were more likely to consider leaving their job. The association between teacher low frustration tolerance and stress is supported by previous research (Bermejo-Torro & Prieto-Ursula, 2006; Bernard, 2016; Popov & Popov, 2015).

Teachers who placed a greater expectation of how the school should operate were also more likely to feel fatigued and interestingly attribute this fatigue directly to their work with students rather than their work in general. Perhaps, these teachers believed that if the school operated in a different manner, the students would behave differently, and as a result they would feel less fatigued.

Teachers that placed higher expectations of themselves or the students were no more likely to be burned out or consider leaving their job. This finding could be particular to the sample. Perhaps teachers who choose to work in specialized settings are less demanding that students should behave a certain way. They may instead have a greater understanding of the students' limitations and capabilities. Similarly, perhaps this sample views themselves as doing the best job they can, and therefore are less likely to place significant expectations on themselves.

Teacher Burnout and Teacher Turnover. Not surprisingly, teacher burnout was consistently associated with teacher turnover. Teachers that endorsed more fatigue were more likely to endorse greater feelings of wanting to leave their job. Similarly, teachers that attributed this fatigue to either their work in general or their working with students also were more likely to consider leaving their job. This finding is consistent with previous research that indicates that that greater burnout among teachers is associated with greater intent to leave their job (Grant, 2017; Rudow, 1999).

Limitations

There are some limitations associated with this research that should be taken into consideration. First, when attempting to study teacher stress, those teachers who experience the most stress may be less likely to take time to complete a survey, thereby leading to a somewhat biased sample. These teachers may feel too exhausted to take on an extra task of completing a survey, or the survey itself may be too emotionally difficult to confront as it may feel very familiar. Second, this sample size was rather small, owing primarily to the specialized population of interest and the narrow geographic area within which recruitment took place. With a greater number of participants, the sample would be more representative of special education teachers. Finally,

many of the measures lacked normative data, and one measure even returned a negative Cronbach's alpha, likely attributable to the small sample size.

Future Research

Future research should continue to look at what variables are associated with teacher burnout and turnover, particularly for special education teachers. Furthermore, research should examine these roles among teachers in specialized settings. By understanding what leads to burnout and turnover among this population, interventions can then be tailored to help teachers who have a desire to help these students.

Future research should also attempt to understand what constitutes support from administration. According to Brunsting (2013), administrative support is not defined consistently in the research. As such, it would be important to understand what exactly the administration must do for teachers to feel supported.

Student maladaptive behavior and teachers' belief that they can no longer tolerate aversive situations were both found to be associated with burnout and turnover. Student maladaptive behavior may be seen as aversive by teachers working with them. Thus, it would be worth exploring if perhaps administrative support might moderate either student maladaptive behavior or teachers' level of tolerance. Perhaps when administration provides appropriate resources that lessen student maladaptive behavior (e.g., classroom management training for the teachers, supportive paraprofessionals), teachers then feel that they can handle the behavior more.

The correlation between teachers' believing that they, as teachers, should somehow be running the school with higher levels of burnout provides background for this rationale. Perhaps teachers believe that if they were running the school better, there would be less student maladaptive behavior. One suggestion is to conduct interviews of teachers asking them what they believe helps a school run more smoothly.

Similarly, research should look at what strategies exist to decrease Low Frustration Tolerance among teachers. Low frustration tolerance was found to be associated with both burnout and turnover, and this finding is consistent with previous research (Bermejo-Torro & Prieto-Ursula, 2006; Bernard, 2016; Popov & Popov, 2015). Perhaps in-service training tailored to teaching teachers' coping mechanisms for reducing their low frustration tolerance may help prevent burnout and turnover among special education teachers.

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Services for Young Children with Disabilities in Romania in the Post-Communist Era

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Abstract

In this paper, we will discuss the historical impact of communism on services for children with disabilities in Romania and the efforts made to support young children with disabilities and their families in the post-communist era. The results of the qualitative study focus on attitudes and beliefs of current special education teachers in Romania, and linkages with DEC Recommended practices when envisioning a brighter future for young children with disabilities in Romania.

Historical Context

From 1947 until 1989, Romania was under the Communist Regime. During this time, most children with disabilities were institutionalized or lived at home with limited or no education or professional assistance. Over the past twenty years, great strides have been made in Romania to improve educational services for children with disabilities, however, like in many developing countries, services for young children with disabilities have lagged behind those for older and typically developing children. The Romanian special education policies and practices have begun to evolve towards inclusion and integration in general education classrooms. However, there are still a series of challenges that impede the implementation of high quality special education services for young children with disabilities.

Located in the southeastern part of Europe, Romania has an area of 92,043 square miles, slightly larger than the state of Minnesota. With a population of about 20 million people, Romania is one of the most densely populated countries in East Central Europe. Approximately 31% of the population are under the age of 5 (CIA, 2018). According to Kitchen (2017), out of the total number of people with disabilities (i.e., 784,527), about 12% are children ages 0-4, and 18.9% are children ages 5-9.

During the 41-year Communist Rule, Romanians were forced to follow all Communist rules, enroll in the communist party, and praise the president without question (Marga, 2002). People with disabilities were not included in society. Thus, most people with disabilities were placed in institutions or stayed home without any appropriate medical and/or educational supports. The transition from the Communist Regime after 1989 has had a positive impact on children with disabilities and their families. Teachers' practices and perceptions of working with children with disabilities has improved over the years, but there are still some cultural, economic, and political influences that can negatively impact services and supports for these children and their families (Ives & Howell, 2011).

After the fall of the Communist Regime in 1989, Romania and the educational system entered an era of drastic improvements. Essentially, the goal for the country was to become modernized and

follow the principles of developed countries such as Germany, the United Kingdom, and the United States (Ives, Runceanu, & Cheney, 2007). Inclusion and best teaching practices in special education became a priority for schools, policy makers, and non-governmental organizations (NGOs). Nevertheless, although progress has occurred, Romania has been slower to adopt and implement new policies to support students with disabilities than other European countries (Walker, 2010). Some of the newly implemented polices were related to the terminology used in special education. According to Nica (2005), "Inclusive education means an ongoing process of upgrading the school institution, with the aim of exploiting (valuing) the existing resources, particularly human resources, in order to support the participation in learning of all pupils from inside a community" (p. 4). Furthermore, special education has become part of the national education system and is comprised of schools that serve students across all age levels (Ives, et al. 2007).

In Romania, students with disabilities can attend public schools, also known as public special schools or private schools, also known as private special schools. In order for public schools to enroll students with special needs, there must be a special education classroom where students with disabilities go to receive requisite supports and services. These classrooms tend to only serve children with disabilities, being taught by a special education teacher. In addition to special education classrooms, children with disabilities in public schools also spend a portion of their day included in general education settings. Although public special schools are free and accessible, and tend to be more inclusive, these schools usually have fewer resources and supports for all children, including children with disabilities (Nicolescu, 2003). On the other hand, private special schools tend to have more resources and supports to offer all children, including those with disabilities. One challenge with private special schools is that they are less inclusive than public schools. Also, as is true in many countries, not all families of children with disabilities can afford to send their children to private schools and generally these schools are located only in urban areas (Nicolescu).

In an effort to improve high-quality inclusive opportunities for children with disabilities, all teachers in Romania, public and private, are required to complete at least a bachelor's degree and attend ongoing professional development opportunities provided by schools to help teachers develop new competencies and effective teaching strategies. Although teachers are required to complete a bachelor's degree and attend a variety of ongoing professional development, Romanian teachers' abilities to implement best teaching practices are still below average compared with other EU countries (OECD, 2006).

Early Childhood Education in Romania

The Romanian school system consists of nurseries or crèches (ages 0-3), kindergarten (ages 3-7), primary (ages 7-11), lower secondary (ages 11-14), and upper secondary schools (ages 14-18). A report conducted by Stativa and Anghelescu (2002) showed that Romania has 287 nurseries and 3,759 kindergarten classrooms. In Romania, nursery and kindergarten are optional. According to the Education for All Global Monitoring Report (2007), 86% of Romanian children enter primary education (at age 8) with previous preschool experience. Therefore, when schooling becomes mandatory at the primary level (age 8), a great deal of time is spent getting children accustomed to being in school, this is especially true for the children who did not attend a nursery or kindergarten.

Nurseries for children under 3 were established in the early 1980s to provide child care for working parents. Stativa and Anghelescu (2002) found that most children attending nurseries were between 19 and 36 months, with only 5% under 8 months. Over the past 30 years, the number of nurseries and children in care has decreased due to fewer parents in the workforce and increased costs of child care (UNICEF, 2005). Over time indicators of staff quality in nurseries, such as child ratios have improved, however, most children are still not taught how to initiate interactions and are not provided with activities that are age and/or developmentally appropriate (UNESCO, 2006). Before 1989, the average staff-to-child ratio was 1:30. Currently, in 80% of the nurseries, the ratio is 1 caregiver for every 8 children. Regarding caregiver/child relationships, the lack of interactions and exposure to age appropriate activities is limited, and thus, may impact children's overall development (Stativa and Anghelescu).

The next level in the Romanian school system is kindergarten (ages 3–7). In contrast with nurseries, kindergarten enrollment has increased in the last decade. The higher enrollment rate was a result of a new national program launched by the Ministry of Education and Research in 2011. The goal of this program was to enhance the quality of educational services for all children birth to 7 years of age, including providing early intervention for children at risk, and to creating resource centers for parents who have children with disabilities. Additionally, the new program aimed to enhance the quality of professional development for all providers who serve children ages birth to 7 (UNESCO, 2006). However, approximately 20% of eligible children do not attend kindergarten due to low funding and parents' lack of understanding of the importance of early education (Nica, 2005). Unfortunately, many children who do not attend early childhood program are those that need it most, including children who come from low-income families or are children with, or at risk for, a disability. In theory, Romanian policy supports mainstream education for all children but in practice mainstreaming of children with disabilities is very limited.

Most of the nurseries and kindergarten programs in Romania are trying to integrate children with disabilities. However, in many cases, teachers do not have the necessary skills and knowledge needed to support full and meaningful inclusion in general education classrooms. Often parents of young children with disabilities choose to enroll their child in a private kindergarten where the personnel are qualified and educational materials are more accessible and abundant. However, access to private schools is generally limited to wealthier families and families who live in urban areas. Young children with disabilities from rural areas in Romania are often taught at home by their parents and do not receive any formal preparation before entering school at age 7 (Iucu, Manolescu, Ciolan, & Bucur, 2008; UNESCO, 2006).

Other options for the education of young children with disabilities in Romania are Waldorf, Step by Step, and Montessori programs. These alternative education programs are part of the state-funded educational system and are recognized by the Ministry of Education as a form of alternative education through an agreement signed in 1996. Because of this agreement, teachers in these schools need to follow the state curriculum and provide individual accommodations for children with disabilities just as they would in public schools. Waldorf kindergarten classrooms are often part of larger public schools in which not all classrooms practice Waldorf education.

Romanian Educators' Attitudes Toward Inclusion

In an effort to better understand the services that are provided to children with disabilities in Romania, the first author conducted a study with Romanian educators to learn more about inclusion. Five special education teachers from two schools; one public and one private, participated in this study. Each teacher had diverse experiences working with children with multiple disabilities starting at age 5. Four out of the five teachers had more than 20 years teaching experience and only one teacher had less than ten years.

Findings from interviews revealed several concerns that Romanian special teachers have about including children in general education classrooms. First, the participants expressed concerns about a *lack of funding for the support of children with disabilities to be successful in general education classrooms.* Teachers who were interviewed believed that special education is still a newer field in Romania and many schools have limited or no funds to support students with disabilities. One participant stated, "there are no funds from the state to pay for the textbooks or for the teacher's assistant, parents need to pay if they want their child to have an assistant." Another participant strongly believed that, "especially when you work with children with severe disabilities, you need an assistant, and the assistance truly benefits the child."

Another theme that emerged from the interviews was about *including students with disabilities in general education classrooms*. All five interviewees noted that including a child with disabilities in general education classrooms depends on many factors, including: a) the level of severity, b) the type of disability, c) the quality and the number of services provided by that school, and d) the families' beliefs about inclusion. Two teachers stated that inclusion in public schools should only be for children with mild disabilities because of lack of services provided by the public schools.

All participants reported that they felt that students in special schools without inclusion receive a "better and more intensive" quality education. For example, one teacher believed that "special schools have more qualified professionals" and students with disabilities have access "to more and better services throughout the whole school day." Additionally, one teacher noted that currently in Romania, special education laws "are flexible" and as a result, special educators can integrate new and innovative methods to support students with disabilities, but this tends to happen in non-inclusive special schools.

One teacher concluded that including students with disabilities in general education classrooms occurs in Romania but often it depends on the general education teacher's willingness or readiness to take on extra responsibilities. Another participant noted that some general education teachers are, "unqualified, don't have the skills to connect with students with disabilities, and they don't know how to establish a positive climate in their classroom." She went on the explain that, "children with special needs are made fun of, placed in the back of the class and other kids use rude language with them."

All five teacher participants agreed that inclusion is beneficial for both students with and without disabilities, but it requires hard work, effective collaboration, and ongoing professional development for all school professionals. One seasoned teacher expressed major concerns about lack of collaboration in public schools: "There is no connection between teachers and teachers,

or teachers and students, there is a big disconnection. Here [in the special, less inclusive school] we work closely together and help the students."

Although, all five special educators agreed that inclusion can benefit students with disabilities, they also reported that for some students, special schools may be a better choice. In special, non-inclusive schools, due to a smaller number of students, teachers can provide more specific instruction to meet all individual needs. For example, one participant believed that "special schools have more qualified professionals" and students with disabilities have access "to more and better services throughout the whole school day." Additionally, as noted in the previous section, special schools are more likely to have funds to provide teaching assistants. One teacher stated that, "there are no funds from the state to pay for the textbooks or for the teacher's assistant, parents need to pay if they want their child to have an assistant." She went on to express that, "especially when you work with children with severe disabilities, you need an assistant, and the assistance truly benefits the child." She also added, "Lack of funds impacts the specific training that we need."

In conclusion, the five interviewees believed that including students with disabilities in general education classrooms is beneficial for both students with and without disabilities, but that general educators in public schools are not yet prepared to work with children with disabilities. The academic demands in public schools are high and general educators are pressured to meet academic standards by the end of every school year. Even though some general educators may have the skills to support students with mild disabilities in their classrooms, they do not have the time or materials necessary to provide the appropriate services and supports to students with more significant disabilities. As a result, the participants believed students with disabilities still face many challenges regarding receiving an appropriate education in a public, general education setting.

DEC Recommended Practices and Future Directions for Romania

Although many positive changes have occurred in the Romanian educational system in the post-communist era, a great deal of change is still needed, especially when it comes to supporting young children with disabilities. As indicated in the findings presented, participants felt that including children with disabilities in general education classrooms is good, in theory, however, they do not feel inclusion is always realistic due to a lack of resources and supports. Based on interview responses, Romanian special educators possess the knowledge and skills necessary to successfully support young children with disabilities, however, they feel that more needs to be done to educate general education teachers and administrators about the importance of inclusion.

Specifically, using the DEC Recommended Practices (Division of Early Childhood, 2014) as a framework, courses related to educating and supporting children with disabilities should be built into teacher preparation programs and ongoing professional development for general education teachers. While challenges remain, we strongly believe that this is the perfect time for Romania and other developing countries to adopt the DEC Recommended Practices as a framework and catalyst for positive change, bringing together policy makers, researchers, school administrators, educators, and families to ensure equal educational opportunities are available for all students with disabilities through the development of efficient and comprehensive inclusive programs.

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Timeline of Historical and Educational Events in Romania

Timeline	Historical and Educational Events
1945	The Yalta Agreement made Romania part of the Soviet Union. The Communist-dominated government was installed.
1968	The Communist Regime passed the first Education Act. This Education Act extended the compulsory education from 8 to 10 years of education.
1980	President Ceausescu ordered a ban on importation of any consumer products and commanded exportation of all goods produced in Romania except minimum food supplies. Severe restrictions of civil rights were imposed, and starvation was rampant.
1989	Romanians protested the Communist Regime and started a national uprising that finally ousted the communist dictator Nicolae Ceausescu and his cabinet. The President was assassinated.
1990	Romania signed new international documents focused on educating children with special needs: United Nations Convention on the Rights of the Child. The Romanian Parliament has ratified the Convention on the Rights of the Child.
1991	Romanians voted for a new Constitution (Article 46 focuses on the rights of people with disabilities).
1994	A new international document was signed: The Salamanca Statement focused on children with special needs.
1995	The new Education Law was passed. This law allows inclusion of special education; all Romanian citizens have equal right to education, at all levels, and all forms.
1997	The Teachers' Statute was passed and determines the provisions for all teachers and modalities to enroll students with disabilities.
1999	Romanian Government set up the National Agency for the Protection of Children's Rights.
2002-2003	Ministry of Education launched a program called: A School for All, aimed to raise awareness about integrating students with special disabilities in schools.
2004	Romania joins NATO. Romania developed a National Action Plan on Education for Children with Special Needs (focus on training programs and educators and creating awareness).
2006	The law (No. 448) regarding the protection and promotion of the rights of people with disabilities was passed.
2011	The Education Law was revised and included a new chapter on the education of children with disabilities and ways to ensure equal opportunities.

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