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The Knowledge and Use Of Multi-Tiered System of Supports Tier 1 Behavioral Management Strategies by Teachers in Saudi Arabia When Students With Behavioral Challenges Are Included In The Classroom

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THE KNOWLEDGE AND USE OF MULTI-TIERED SYSTEM OF SUPPORTS TIER 1 BEHAVIORAL MANAGEMENT STRATEGIES BY TEACHERS IN SAUDI ARABIA WHEN STUDENTS WITH BEHAVIORAL CHALLENGES ARE INCLUDED IN THE CLASSROOM

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ABSTRACT

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The purpose of this study was to investigate the knowledge and use of Tier 1 interventions found in the MTSS literature by general education (GE) elementary school teachers when students with behavioral challenges are included in their classrooms. The researcher utilized a purposive sampling procedure and targeted teachers from the Hail Region School District in Saudi Arabia. A 98-question survey consisting of five sections was used to measure the variables as presented to obtain data from 95 Saudi Arabian general education elementary school teachers. It focused on four themes: (a) Teachers' Perceptions of Inclusion of Students with Challenging Behaviors; (b) Teachers' Knowledge of MTSS Tier 1 Strategies (i.e., Knowledge of Foundational Behavior Management Strategies, Knowledge About Surface Management Strategies, Knowledge of Positive Consequences, Knowledge of Negative Consequences); (c) Teachers' Use of Specific MTSS Tier 1 Strategies; and (d) Teachers' Use of MTSS Tier 1 Strategies (i.e., Teacher's Use of Foundational Behavioral Management Strategies, Teacher's Use of Surface Management Strategies, Teacher's Use of Positive Consequences, Teacher's Use of Negative Consequences). The results of the study showed that the majority of the GE elementary school teachers who responded that they knew about MTSS Tier 1 strategies, did not know how to use the strategies. The findings also showed that the sources where the respondents learned about the strategies were: a website on the Internet, a colleague shared it,

read about it in a book, and a workshop on behavior management. When the teachers' use of MTSS Tier 1 strategies were compared with their years of teaching experience, the results revealed that those with more years of teaching experience stated they knew about and more often used evidence-based MTSS behavior management strategies when they had students with challenging behaviors included in their classrooms.

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CHAPTER I

INTRODUCTION

The importance of Multi-Tiered System of Supports (MTSS) Tier 1 behavioral management strategies in establishing and maintaining a positive classroom atmosphere cannot be overemphasized (A. Lee, 2020). MTSS is a process that uses a framework focusing on the use of high-quality instruction and strategies for all students. All decision-making and problem-solving practices are based on data and used across the educational settings. These practices are particularly useful in supporting students who exhibit behavioral challenges in the classroom. It is suspected that teachers in Saudi Arabia are not adequately prepared in the most effective, evidence-based strategies that are included in the first tier of MTSS (Alhossein, 2016). This chapter begins by providing background from the literature on the MTSS model Tier 1 strategies. Next, it will describe different aspects of the Saudi educational system that could be impacted by teacher use of the MTSS model Tier 1 strategies at the elementary school grade levels. The chapter then concludes by presenting the statement of the problem, the purpose of the study followed by the research questions, the study limitations, and definition of terms.

Background on Multi-Tiered System of Supports Tier 1 Behavioral Management Strategies

Challenging behaviors are often cited as the most significant issue general education (GE) elementary school teachers face in the classroom. When students experience such issues, they may fail to understand traditional methods of classroom instruction delivery or be hindered in communications skills development (Orr et al., 2020; Ruhl et al., 1992). These students often

lack the ability to concentrate on academics and their issues may interfere with the safety of the classroom environment for themselves and their peers. In turn, this may increase the levels of stress and anxiety teachers exhibit to an extent that hinders their job performance. When these behaviors are not addressed with effective strategies, GE elementary teachers struggle to maintain the flow of instruction for all students, are unable to support students in achieving improved academic and social development outcomes, and often experience teacher burnout resulting in their leaving the teaching profession (Murry, 2018; Skaalvik & Skaalvik, 2016). Therefore, being an effective classroom manager is a critical characteristic of the successful teacher.

One useful tool for classroom management is Response to Intervention (RTI), which is described and mandated in both the Individuals with Disabilities Education Improvement Act (IDEA, 2004) and Every Student Succeeds Act (2015). In most schools, RTI is supported through a multi-tiered system. Specifically, the reauthorization of IDEA in 2004 required school districts to use the multi-tiered system of supports to identify students with a specific learning disability rather than various traditionally used methods, such as those that involved IQ-testing criteria (Kauffman et al., 2017). Therefore, understanding the strategies that fit within the multi-tiered RTI model has been deemed an essential part of teacher preparation, one that allows educators to effectively teach all students, including students with behavioral challenges (Mandlawitz, 2006). While RTI is designed to provide high quality behavioral management strategies for all students beginning in Tier 1 of the model, the MTSS model strives to provide instructional academic and behavioral strategies that meet students' needs. The model employs an umbrella of services for both teachers and students and includes directions for teachers to: (a) monitor student progress frequently, (b) make decisions about instructional methods, and (c)

routinely evaluate collected data on student progress to determine whether there is the need for referral to special education services (Batsche et al., 2005; D. Fuchs & Fuchs, 2006; Orr et al., 2020).

A significant component of the MTSS is the use of Positive Behavior Intervention and Supports (PBIS) prior to the use of punitive strategies. PBIS works as a parallel model within the greater framework of MTSS for addressing the prevention of challenging behavior in all students as well as academic strategies for students who are at-risk or failing in content areas (McIntosh et al., 2010). PBIS is a support system for teachers to employ to meet the mandated requirement to implement RTI. To integrate RTI and PBIS, MTSS includes a set of evidence-based practices implemented across a system to meet the needs of all learners. The typical model here also involves multiple tiers. MTSS Tier 1 involves teaching and reinforcing a set of appropriate behaviors for all students. For example, MTSS Tier 1 might establish classroom and behavioral management instruction teachers can utilize to manage students' behaviors (McIntosh et al., 2010, p. 6).

Research conducted by A. Lee (2020) indicates that teachers who implement MTSS Tier 1 behavior management strategies, can effectively manage challenging behaviors that arise in their classrooms. Tier 1 includes those behavioral strategies applicable for all students and are considered the foundational support for teachers to maintain the flow of instruction as described by Colvin and Scott (2014). Tier 2 refers to behavior management practices that general education teachers use for students who need more focused teaching in smaller groups for such subjects as social skills, self-management, and other academic support (Kowalewicz & Coffee, 2014). Saudi Arabian GE teachers often employ a wide variety of behavior management strategies for their students in MTSS Tier 1 rather than focusing on the use of evidence-based

strategies (Alhossein, 2016). However, evidence-based strategies are preferable because they provide teachers with behavioral strategies that focus on addressing disruptive behaviors; therefore, they should be prioritized for use over those that are not evidence-based. Moreover, Saudi teachers frequently report using punitive approaches to correct student misbehavior rather than techniques that involve positive reinforcement. This occurs despite the fact that there is extensive support in the literature regarding the benefits of employing positive behavior strategies in schools (Ministry of Education, 2018).

Some studies have examined the use of MTSS Tier 1 strategies on constructing guidelines for writing effective classroom rules to manage classroom behaviors (Evertson & Weinstein, 2013; Guerra, 2016; Shea & Bauer, 2011). Writing effective classroom rules is one technique noted in Tier 1 as being useful in preventing student misbehavior and supporting the following of classroom instructions. To effectively implement this intervention, teachers are directed to write the rules using the following guidelines: (a) use positive terms; (b) use jargon-free terminology; (c) use observable and measurable terms so the rules can support evaluative data collection; and (d) display the expected behaviors in a manner that is accessible to students (Algozzine et al., 2011; Ingersoll & Smith, 2003; Perrachione et al., 2008; Shea & Bauer, 2011).

Teachers who are knowledgeable in Tier 1 strategies as a result of teacher preparation or professional development on the use of evidence-based strategies are better able to create classroom environments that positively promote the social and academic outcomes of their students, as well as maintain their own self-efficacy (Algozzine et al., 2011; Ingersoll & Smith, 2003; Perrachione et al., 2008). In 2014, the National Council on Teaching Quality in the United States established five strategies as essential aspects of pre-service teacher preparation, through an examination of the research literature (Greenberg et al., 2014). The Council found that the

literature over the last six decades is in agreement regarding five Tier 1 foundational strategies that are critical for teachers to employ to maintain desirable classroom behavior. These are (a) establishing and teaching classroom rules; (b) building structure and establishing routines; (c) providing positive reinforcement; (d) imposing consequences consistently; and (e) ensuring opportunities for active student participation during instruction.

In the United States and Saudi Arabia, teachers have long advocated for more education and training in the area of classroom management--whether this training is provided in the pre-service college years or through professional development (Bawaneh et al., 2020; Coppersmith et al., 2020). This is because teachers recognize that when students present challenging behaviors in the general education classroom, educators must have a strong foundation in effective classroom management strategies to support the flow of instruction without interruption (Coggshall et al., 2012; Farkas et al., 2003). In fact, when surveyed, over 40% of new teachers stated they felt less than adequately prepared to handle the range of student behaviors present in the average general education classroom (Scholastic Inc. & the Bill & Melinda Gates Foundation, 2013).

Specifically, an examination of policies in Saudi Arabia has found that all GE teachers are not aware of positive behavior management strategies they can use in their classrooms (Al-Fatali, 2007). More recently, in 2018, researchers asserted that students with behavioral challenges tend to have social and academic challenges that impair their social interactions and academic performance (Didion et al., 2018). Students with challenging behaviors may fail to understand classroom instruction or be hindered in communications skills development (Gregg, 2017). The lack of knowledge of implementation greatly impedes the ability of elementary GE teachers to successfully intervene when behavioral challenges arise in their classrooms, and in turn, these educators struggle to improve the academic and social skills of their students (Hood,

2011). General education teachers in Saudi Arabia who lack this knowledge encounter difficulty when trying to establish effective learning environments and implementing effective classroom management techniques (Alrwaily, 2016).

Similarly, Saudi elementary GE teachers state they do not feel the professional development available to them in the area of behavior management intervention prepares them adequately to successfully teach students who present behavior challenges in the classrooms (Al-Fatali, 2007; Alrwaily, 2016). Saudi Arabian law currently directs that students identified with behavioral challenges, as their peers with other disabilities, be instructed to the greatest extent possible in the least restrictive environment, which is the general education classroom (Al-Mousa, 2010; Murry & Alqahtani, 2015). This directive is part of a country-wide effort to reform education and implement strategies that will allow teachers to manage the behavior of all students, including those with behavioral challenges, so that all can be educated in the GE setting (Alquraini, 2010; Crone et al., 2004). Therefore, an important part of ensuring a constructive learning environment for all students, as mandated by the Ministry of Education, is to ensure Saudi teachers have all the tools they need to know how to create successful, inclusive classrooms (Al-Mousa, 2010). If teachers lack these skills, it can impact the learning outcomes of all students in the classroom (Al-Fatali, 2007).

Education System of Saudi Arabia

As with the rest of the Saudi culture, the education system is built upon essential components of Islam. In the educational system, this means a centralized system that is segregated by gender; males and females are educated separately, and education is fully funded by the state. Originally, children were educated in reading the Holy Quran whereas adults were taught Islamic sciences, economics, and other fields in the mosques (Alabdulkareem, 2004). In

1932, the Saudi education system comprised only 12 schools with a total of approximately 700 students composed of children from wealthy families (Alamri, 2011). However, once oil was discovered in 1938, the education system began to expand very quickly, and almost all children were given the opportunity to access education.

Less than 20 years later, the Ministry of Education was established, charged with updating the education system and ensuring education was available all over the country. King Fahd Bin Abdelaziz was the first minister of the department, appointed in 1953, and he oversaw the creation of school districts for the delivery of public education throughout the country (Saudi Arabian Cultural Mission, 2006). A country-wide public school system was established by 1985, where each community delivered education to all students based on one system that included, "a 6-year elementary, a 3-year intermediate and a 3-year secondary cycle with a separate higher education program" (Saudi Arabian Cultural Mission, 2006, p. 1). The philosophy of this system rested on two major principles: education and the development of human resources, and to build an overarching infrastructure to support economic development. These were seen as the areas with the highest priority to align with the national plan for development (Saudi Arabian Cultural Mission, 2006).

Today, the Ministry of Education's mission has expanded. It administers, establishes, and supervises all school districts in the country. In coordination with the Ministry of Labor and Social Affairs and the General Organization for Technical Education and Vocational Training, the Ministry of Education also ensures that students are able to access vocational and technical training (Althabet, 2002). The Ministry also oversees ensuring that gender segregation of students is maintained. This is done through males and females studying at separate schools

where they are taught by teachers of the same gender. Furthermore, this department confirms that education is free to all students at all grade levels, including those with disabilities.

These efforts on the part of the Ministry have resulted in a system that includes 25 public and 27 private universities, consisting of a total of 30,000 schools as well as a large number of colleges and other institutions. The country provides all citizens at all levels of socio-economic status with free education, that includes the necessary materials and health services. The education system includes: pre-K, elementary, middle, and high school, and undergraduate through postgraduate university studies. While the education system maintains a focus on Islamic studies, the Saudi education system also provides instruction in a diversity of fields such as the arts and sciences (Embassy of the Kingdom of Saudi Arabia, 2013).

Special Education System in Saudi Arabia

After 1985, the Ministry of Education started delivering special education services for students with disabilities (Alquraini, 2012). One such institute, Al-Noor, specialized in the delivery of special education services for students with disabilities. This institute was the first special education program in Saudi Arabia and educated only male students who were blind. The learning and education system at this institute was built based upon the Ministry of Education guidelines. The first actual special education school was established in Riyadh by the Ministry of Education in 1960; its mission was also to serve blind students. This school was called The Institute of Light for the Education and Training of the Blind (Ministry of Education, 1981).

A special education division was created by the Ministry in 1962, to oversee the education of students who are deaf, blind, and/or have cognitive disabilities (Afeafe, 2000). Two years later, the Ministry of Education opened the first girls only school for blind students. In 1964, two more institutes were opened in Riyadh, both to educate the deaf; one to teach boys and

one to teach girls. A program for those with intellectual disabilities was not created until 1971 (Ministry of Education, 1981).

In 1974, all centers serving students with disabilities were organized under the General Secretariat of Special Education (GSSE). The GSSE continues to administer and coordinate programs for students with disabilities, including: intellectual disability, Deaf/Hard of Hearing, visual impairment, learning disabilities, emotional and behavioral disorders, speech and language disorders, physical disabilities, autism spectrum disorder, and for all students identified as gifted and talented (Al-Faiz, 2006). Between 1961 and 1987, the Ministry of Education created and supervised an education system of 27 schools. As of 2006, schools for students with special needs now include: 28 schools for deaf students, 10 for blind students, and 16 for students with intellectual disabilities (Saudi Arabian Cultural Mission, 2006). Between 2011 and 2012, the Ministry of Education further expanded and now supervises 413 schools. As of 2012, these schools include: 345 elementary schools, 35 middle schools, 22 high schools, and 11 rehabilitation institutions. These programs are designed to serve students with a range of physical and cognitive disabilities, including intellectual disabilities and autism; whereas, there are no high schools for students with learning disabilities or students with physical disabilities (Ministry of Education, Special Education Department, 2017).

Settings and Curriculum

In Saudi Arabia, the particular setting where a student with disabilities is educated is determined by the type and severity of the disability. Up until 2008, 96% of students with disabilities considered severe were served in private institutions and/or self-contained settings, where full or partial inclusion was not possible under the Saudi educational structure. The system greatly reduced the opportunities for students with disabilities to have equal access to

educational services to improve their communication, social, and academic skills (Alquraini, 2010). The students all have Individualized Education Programs (IEPs), as mandated by the Ministry of Education, which are designed specifically for the individual student and that fully describe all necessary accommodations and the specialized curriculum the child should receive (Alquraini, 2012). This practice continues to this day.

The education system, as mandated by the Ministry of Education, states that students with severe disabilities must receive services in either special education institutes or public schools. However, the Saudi education system lacks the ability to provide needed services for certain of these students in the general education classroom. There is also a lack of related service personnel, including language pathologists, occupational therapists, and physical therapists (Alquraini, 2010). These educational environments lack personnel and positive, motivating learning environments for students with disabilities.

Saudi Arabia has around 40 programs that can accommodate students with behavioral challenges. These programs are in public schools and independent centers designated for special education only, where these students as well as those with autism and intellectual disabilities, are served (Zeina et al., 2014). The centers and programs serve approximately 2,446 students with behavioral challenges, which is only a fraction of the 48,000 to 50,000 Saudi children who have been identified as having behavioral challenges (Ministry of Education, Special Education Supervisors, personal communication, September 27, 2019).

Teacher Preparation to Support Inclusion

The research establishes that cognitive skills are better developed by creating stimulating environments. As Vygotsky stated in his sociocultural theory, cognition is developed through the individual's experiences and interactions with the environment (Vygotsky, 1978). Through this

theory and related research, it is understood that individuals with disabilities can obtain better outcomes academically and socially when their education occurs in an inclusive environment with their typical peers (Alquraini, 2010).

These findings support the idea that education of teachers is critical to ensuring that all students, with and without disabilities, receive an appropriate and comprehensive education. The Ministry of Education understands this and directs that all in-service educators should receive appropriate professional development so that they may provide comprehensive services to their students. To provide this wide array of services, it is required that teachers understand how to create effective learning structures and implement strategies for all students in the inclusive general education classroom. To accomplish this, the Ministry has created an ambitious initiative to educate teachers and other education professionals overseas, where they might obtain master's and doctoral degrees and then return to Saudi to act as faculty in Saudi university education programs. These individuals are then also able to deliver comprehensive professional development programs to in-service teachers to enhance teacher performance, according to the needs of curricula, some of which are developed in cooperation with specialized private sector corporations.

Legislation approved by the Ministry of Education in 2001 established the rights of students with disabilities to equality in education and the rights of all individuals with disabilities to have equality and freedom from discrimination in their lives, in general (Murry & Alqahtani, 2015). The legislation also clearly defined how special education programs should be developed and the processes by which students with disabilities should receive special services, including: diagnosis, evaluation, intervention, prevention, and the provision of other services as needed to support their independence in adulthood (Alquraini, 2010; Ministry of Health Care, 2012).

It is absolutely vital that all in-service Saudi teachers receive professional development and supervision from knowledgeable administrators throughout the academic year so as to appropriately support all students. They must be able to develop learning environments based on evidence-based strategies that engage and motivate students with and without disabilities. To this end, they will also be able to educate students with disabilities with their typical peers in inclusive school environments.

Statement of the Problem

In Saudi Arabia, Education Law 227 requires that students with challenging behaviors and other students with disabilities be included in the general education classroom (Al-Mousa, 2010; Murry & Alqahtani, 2015). Prior to the implementation of this law, researchers had found that most Saudi elementary school GE teachers were not aware of appropriate strategies to use in classroom management with their students with challenging behaviors (Al Abduljabber, 1994; Al-Fatali, 2007). Other research, including very recent studies, has asserted that there is a need for professional development, particularly in understanding and employing multi-tiered behavioral strategies, to facilitate teachers obtaining necessary skills to employ with students with challenging behaviors and other students with disabilities (Sandilos et al., 2018).

In 2014, research by Alnahdi found that Saudi GE teachers require professional development concerning behavioral management strategies as outlined in the literature on MTSS Tier 1 to provide environments that support all students in understanding and following instructions, particularly those students with behavioral challenges. Furthermore, Alnahdi (2014) discovered that even teachers who have participated in professional development do not perceive that they have received information on practices that support inclusion for students with disabilities, including students with behavioral challenges. The importance of a good foundation

for teachers on behavioral strategies from the MTSS Tier 1, must be emphasized and be delivered in an effective, usable way for teachers to subsequently implement.

Purpose of the Study

The purpose of this study was to investigate the knowledge of elementary school GE teachers and their use of Tier 1 strategies as found in the literature on the MTSS Tier 1 model when students with behavioral challenges are present in their classrooms. This study asked elementary school GE teachers in Saudi Arabia to indicate if they have knowledge of these strategies, if they use these strategies, and, if so, how often they employ these strategies. In addition, those teachers who responded that they do use these practices were asked where they had learned to use the specific strategies. Demographic data were collected and analyzed to determine if different personal characteristics and factors correlated with knowledge and use of Tier 1 strategies.

Research Questions

Q1 Do general education elementary teachers in Saudi Arabia perceive that they have students with challenging behaviors in their classrooms?

Q2 Do general education elementary teachers in Saudi Arabia have knowledge about specific Tier 1 behavioral strategies?

Q3 Do general education elementary teachers in Saudi Arabia use specific Tier 1 behavioral strategies in their classroom when students with challenging behaviors are present?

Q4 Where do general education elementary teachers in Saudi Arabia learn how to use the specific Tier 1 behavioral strategies?

Q5 How does the relationship between regular use of specific Tier 1 behavioral strategies when students with challenging behaviors are included in general education elementary teachers' classrooms in Saudi Arabia differ among their years of teaching experience?

Assumptions and Limitations

One of the possible assumptions identified as having the potential to impact this study was that the teachers might try to answer the different questions in the way they believed was expected of them or that would be perceived by the researcher as "correct." Another assumption established beforehand was that the teachers' attitudes toward inclusion of students with behavioral challenges in the GE classroom might influence their responses to the survey items in a more positive or negative direction, depending upon their philosophical stance.

Several factors limited the generalizability of the study results. First, all the respondents were recruited from the northern region of the country and therefore might not be reflective of the types of responses one might obtain by surveying teachers in other regions of Saudi. These variations that might impact generalizability include socioeconomics; proximity to higher education/university resources where professional development, for example, might be accessed; cultural factors; and population density (rural/urban/suburban). The honesty of the respondents will play an important role in the accuracy of the collected data. The sequence of the questions was designed to lead the participants to first confirm their knowledge of strategies and then of their use. This sequencing creates checks to support the accuracy of participants responses and to identify any incongruence between their perceived knowledge and their use of the strategies.

Definitions of Terms

Behavioral challenges. Conduct exhibited by an individual that is characterized by, among other things, a likelihood that it will limit or delay the delivery of instruction in the classroom to both the individual and their peers.

Classroom management. The techniques and practices teachers employ to maintain a positive atmosphere in the educational setting that helps students stay organized, orderly, focused, attentive, on-task, and academically productive during class.

MTSS Tier 1 Behavioral Management Strategies. Classroom and behavior management strategies that teachers may use to create a supportive atmosphere for students with a diversity of needs.

Multi-Tiered System of Supports (MTSS). This is a multitiered framework designed to assist educators in identifying appropriate evidence-based academic and behavioral strategies for creating a constructive classroom environment for all students, including those with behavioral challenges.

Positive Behavior Intervention and Supports (PBIS). A system of methods that teachers may use to identify and support desired behaviors in the school setting.

Response to Intervention (RTI). This is a multi-tiered system teachers can use for the early identification and support of students with behavioral needs, and sometimes used to assist students with their learning.

CHAPTER II

LITERATURE REVIEW

Introduction

Detailed and well-developed Multi-Tiered System of Supports (MTSS) behavior management practices are vital to maintaining a productive and positive classroom environment. As discussed in Chapter I, the most commonly identified model of MTSS consists of three tiers. Tier 1 provides a program of instruction that is differentiated and universal, designed to meet the needs of every student. Tier 2 consists of interventions that can be delivered in small group settings to students who have been identified as nonresponsive to Tier 1 strategies. The third tier is for the student who is not meeting success in the classroom through the use of differentiated instruction. Typically, in this case the issue is a student's challenging behavior that has not been resolved through Tier 2 small-group interventions. Tier 3 is the application of intensive and targeted interventions specifically designed for the individual student (Gibbons et al.,. 2018; Pechacek & Ehlers, 2019).

This chapter presents the research on the history of MTSS behavior management strategies in education, followed by descriptions of various studies that have been conducted on how specific behavioral management strategies are used in the classroom. Additionally, this section will describe how the use of MTSS is supported by the theories of two constructivists who contributed to the development of the concept of intervention in education. Also included is a description of various studies conducted that focused on Tier 1 interventions for behavioral management in the general education (GE) classroom. Furthermore, the literature review will

explore the impact of professional development for MTSS practices to support educators in meeting the requirements of various education laws. Through this examination of the research, the author will fill a gap in the research regarding the knowledge and use of MTSS Tier 1 practices by Saudi elementary school general education teachers.

Background on Multi-Tiered System of Supports

Multi-Tiered System of Supports in Behavior Management

Harn et al. (2015) and Horner et al. (2010) defined MTSS as a tiered system of increasing instructional time and intervention intensity to improve educational outcomes for students in both general and special education classrooms. Other researchers, like Flower et al. (2017), emphasize that the system is designed to maintain positive classroom management practices for students with/without disabilities in the GE classroom. On the first MTSS tier, the model establishes that GE teachers are to provide appropriate behavioral, social, and emotional supports when serving the varied needs of all students in an inclusive classroom (Harn et al., 2015; Horner et al., 2010).

A study conducted by the Natonal Association of School Psychologists (NASP, 2016), supports using MTSS for all students, as it is a comprehensive system that addresses the academic, social, emotional, and behavioral development of all students, including those who may exhibit challenging behaviors. Myers et al. (2015) described the framework more deeply; it is one that comprises principles of RTI and PBIS in a manner where they work together using a range of system-wide resources, strategies, structures, and evidence-based practices, for managing the classroom to support student learning and discipline.

Other researchers, such as Harn et al. (2015), have examined how MTSS specifically supports the management of students who are struggling with behavioral challenges. The Harn et

al. (2015) research involved a longitudinal study on student outcomes, including collecting data on student progress over each year, and gathering information on how, for example, behavioral challenges might affect a student's reading achievement. This study employed MTSS strategies to improve reading outcomes by implementing practices that support students with behavioral challenges. The MTSS strategies included obtaining a better understanding of the students by implementing a standardized coding system to track those identified as at-risk. The authors used Tier 1 instructional approaches (e.g., teacher/systematic and whole word) for all the students in the classroom. The study's purpose was to employ RtI to identify and treat those with reading difficulties. The findings were that without intervention to address behavioral challenges, students will continue to experience significant difficulties in reading outcomes. Therefore, MTSS can be employed to improve not just behavior but, by extension, academic outcomes as well.

Some research, including Moors et al. (2010), examined the Precision Teaching concept in support of MTSS. The Moors et al. case study examined the rapid progress of a class of students, including students with challenging behaviors, after the intervention was implemented. Precision teaching employs a multi-level assessment system, combined with evidence-based practices of teaching and learning, within the RtI framework. As a result of implementing the precision teaching practice, students showed a systematic acceleration of progress in mathematics. The purpose of the study was to provide teachers with solutions to solve the existing issue of student difficulty in composition skills. To teach these skills, teachers must acknowledge that students best learn such abilities directly, which means teachers must expose students to the given instructions and then shift to the updated instruction (i.e., the specific lesson) only when the student has mastered the ability to an 80%-100% degree. As part of the

first tier of MTSS, the precision teaching method created a common language amongst students, teachers, families, and administrators.

Positive Behavior Interventions and Supports (PBIS) is also a component of the MTSS model. A study conducted by Utley and Obiakor (2012) examined the introduction of an MTSS intervention that was incorporated with the school wide PBIS program titled "Cool Tools." This research occurred at an elementary school in an urban setting and found that using this targeted MTSS intervention (Tier 2) supported the improvement of specific behaviors. Cool Tools strategies include concepts such as: establishing classroom rules in a way that is accessible to every student and that is consistent with the school-wide environment; and, creating practices that are implemented in a consistent fashion to clearly establish the structure of the school day. Seven teachers in grades K-5 implemented the intervention using Cool Tool strategies over six weeks to work on group-based social skills. The authors included components of the practice, such as: "(a) teaching appropriate skills and de-emphasizing inappropriate behaviors; (b) systematic teaching of social skills; (c) personalization of instruction to fit the classroom environment; and (d) elimination of extensive teacher preparation" (Utley & Obiakor, 2012, p. 50), which were modified and adapted to teach behavioral expectations and skills. The findings were that implementing targeted strategies to improve specific behaviors leads to students exhibiting more positive behaviors (Utley & Obiakor, 2012).

District leadership is considered by some researchers to be critical to the success of multi-tiered systems of support. For example, a study conducted by Freeman et al. (2015) examined how district administrators can support the implementation of MTSS at the school-level. The researchers stated that this can be achieved by providing mechanisms and services to schools and

personnel that make it easier to implement these practices to support both academic and behavioral outcomes and skills development (Freeman et al., 2015).

Theoretical Support for Multi-Tiered System of Supports

Two individuals are considered the main theorists who created the foundation for the concept of intervention in education: Lev Semionovich Vygotsky and Albert Bandura. Vygotsky, who was Russian, is known as the originator of sociocultural theory. Canadian-born Bandura developed the concept of social cognitive development. Much research on cognitive development and learning, in the United States and elsewhere in the world, relies on their ideas (Bandura, 2006; Daniels, 2005). In particular, the work of these two theorists has impacted the way GE teachers approach managing behavior when students with behavioral challenges are in the classroom. Specifically, examining the major theoretical concepts of Vygotsky and Bandura allowed for the development of MTSS behavioral management strategies (Averill et al., 2011; Bodrova & Leong, 2015; Daniels, 2005).

Psychologist Vygotsky, known as the "Mozart of Psychology," was interested in a variety of topics as a young man but eventually focused on the study of psychological theory. Vygotsky completed 270 articles, numerous lectures, and 10 books in the areas of psychological and educational theory. Despite his prolific work, he was not very well-known outside of the Soviet Union during his short lifetime; he died at 37 years old. However, his work was widely published, and he became well-known more than 30 years after his death (Bodrova & Leong, 2015; Daniels, 2005). Vygotsky's research focused on expanding his social development theory, which states that our social experiences and interactions affect our development, meaning that consciousness and cognition are the end products of socialization and social behavior (Vygotsky, 1980). Vygotsky's theory of social development is considered one of the foundational works of

Social Constructivist Theory (SCT), which has three essential components: (a) social interaction, (b) the More Knowledgeable Other (MKO), and (c) the Zone of Proximal Development (ZPD) (Vygotsky, 1978).

Abtahi et al. (2017) demonstrated how the elements of Vygotsky's theories (e.g., social interaction, MKO, and ZPD) could be used to show how the experiences and social interactions of individuals influence their learning. The Zone of Proximal Development (see Figure 1) presents how an individual learns a new behavior or concept. At the center is the individual and the learning/development the individual can achieve alone or that the individual already possesses. Next is the zone of proximal development, where the individual can learn a concept but only with assistance. Finally, there is the outermost ring, this is the area of development or learning the individual cannot yet access because the items/MKOs necessary to do so are not accessible.

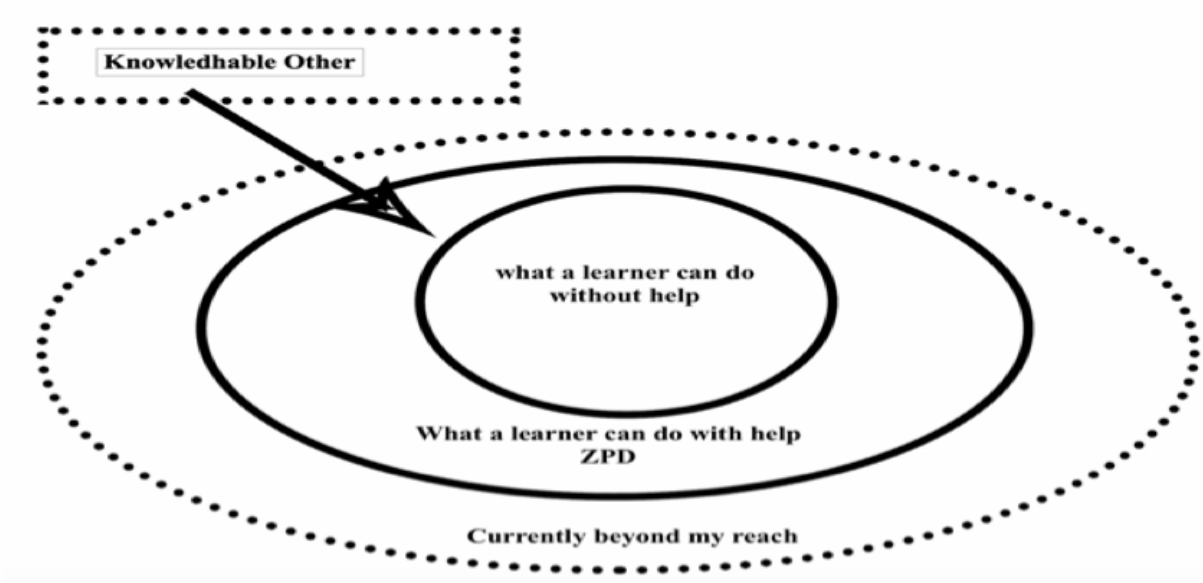

Figure 1. Vygotsky's Zone of Proximal Development. Adapted from "Vygotsky's Sociocultural Theory of Cognitive Development." Copyright 2018 by the Psychology Notes.

According to Vygotsky's social interaction model, social skills can be supported through planned social interaction with an adult mediator. A modern example of this would be the intervention Behavior Bingo, which relies on the social interaction model. Behavior Bingo was created by Collins et al. (2018) for use by teachers in developing positive and constructive classroom behaviors and reducing or eliminating disruptive and off-task ones. It is a group contingency intervention to manage the classroom behavior of students with emotional behavioral disorders. The intervention involves a modified Bingo board, a Bingo card for each student, the announcement of the goals and rules, a container filled with paper slips, and a list of behavior bingo rewards. For the intervention, the students are divided into groups, the first group to achieve "Bingo" is then able to access a reward. Behavior Bingo also provides students with EBD the opportunity to interact with their peers. Collins et al. (2018) found that students demonstrated a decrease in disruptive behavior and an increase in on-task behavior, following the intervention.

The game is often used as a Tier 1 behavioral intervention to manage general education classrooms because researchers, such as Nolan et al. (2014), have found that Behavior Bingo can be employed as a positive reinforcement intervention. As explained, the teacher uses the practice to create a reward (Nolan et al., 2014). The aim of the intervention is to clearly show students how they can earn positive reinforcements, which in turn supports the development of student accountability for behavior.

Another aspect of Vygotsky's social interaction model is the role of the adult mediator, which Vygotsky defined as an active member in the child's life. Social interaction model has been used to develop MTSS Tier 1 strategies, such as Opportunities to Respond (OTR). This intervention includes an instructional question, designed statement, or sign made by the teacher

to obtain a response from students (Sprick et al., 2006). In one example of OTR, Anderson et al. (2018) proposed the use of social skills intervention to increase the positive social interaction skills of kindergarten students, especially for students who exhibited social and behavioral challenges on the playground. An adult was assigned by the authors to be present with the students to provide direct instruction on the playground based on social lessons. Specifically, all students were given direct instruction on social skills by the adult, in practices such as: "how to introduce yourself;" "how to talk to others;" "how to ask to play with others;" and, "how to play appropriately with others." Students were directed in how to interact with each other by themselves and by the adult, in support of developing their social skills. Students demonstrated significant improvement following the implementation of the intervention in the area of increased positive social interaction.

Vygotsky's concept of the Zone of Proximal Development (ZPD) is also critical to the construction of an OTR. In Watts et al. (2019), peer and cross-age tutors with emotional and behavioral disorders (MKOs) were employed to improve the behaviors of third-grade students with behavioral challenges. To begin, the investigators took on the role of the MKO while they trained the older students how to be tutors. The training procedures included modeling, providing practice opportunities, teaching corrective feedback procedures, and how to present positive behavioral reinforcement techniques. The investigators observed the older students with behavioral challenges using momentary time-sampling procedures and rotated tutors every 30 seconds. Then, the student tutors were directed by the investigators in how to use instructional techniques (e.g., how to start games and keep their tutee on-task) and how to greet their younger tutees. They also instructed them in how to review the previous session (e.g., what was

successful, what needs improvement). The study resulted in positive behavioral outcomes, such as an increase in academic skill, increased time on-task, and improved classroom behavior.

Vygotsky's ZPD is the area that encompasses what an individual can accomplish with help. Alqahtani and Murry (2015) integrated the ZPD into their Peer Buddy Program, to help students with EBD improve their social skills so they could function successfully in the general education classroom. The researchers proposed that matching students without EBD to peers with EBD in the GE setting would support these students. All the students, the peer buddies and the students with EBD, were assigned the same GE curriculum with the same assignments. The peer buddies worked with the students with EBD in the special education classroom setting, where the pair could receive more support when needed. The students with EBD worked alone when they could but were then supported by their peer buddies when a challenge arose--this is the essence of the ZPD. The results were that the Peer Buddy program had a positive impact on students with EBD by increasing social skills as well as academic skills. This strategy is an evidence-based practice for behavioral management.

Albert Bandura is the second scholar on whose work much of MTSS intervention is based. Bandura attended the University of British Columbia, majoring in biology. However, he became interested in psychology and eventually decided to pursue a degree in the field (Pajares, 2004). He achieved a doctorate in Clinical Psychology from the University of Iowa in 1952, was the president of the American Psychological Association in 1974; and, was recognized for his lifetime contributions to the field of psychology in 2004. Bandura is often referred to as the father of cognitive theory (Bandura, 2006). Social Learning Theory (SLT) was originally introduced in the sixties with more development presented in 1977; it is a way of describing how children learn from one another and others through observation, imitation, and modeling. SLT is

the basis for high-leverage practices (McLeskey et al., 2017; Nabi & Prestin, 2017) educators may use to support positive and constructive behavior in the classroom (Crain, 2015; Muro & Jeffrey, 2008). The basis of this theory is that individuals learn from others during normal daily social interactions. As children mimic the desired behaviors of peers and others in their environment (social imitation), educators and other adults in the children's lives can support these desirable behaviors through positive reinforcement (Akers & Jennings, 2019; Bandura, 1977).

Bandura's social learning theory is considered one of the most influential of the theories for understanding how human learning and behavior develop. Bandura sees social learning theory as one that connects theories on behavior and learning, because it takes into account the interaction between cognitive, behavioral, and environmental influences on human attention, memory, and motivation (Agarkar & Brock, 2017). Subsequently, social learning theory evolved into Social Cognitive Theory (SCT), in the mid-80s. These theories shifted the focus from social learning--which occurs through observation, imitation, and modeling--toward a model that observes the impact of the continuous reciprocal interaction between cognitive, behavioral, and environmental influences that affect an individual (child) through observation, understanding, predicting, and changing human behavior (Bandura, 1989).

Observational learning occurs through the modeling of observed behaviors. To begin, the student observes as a model engages in effective behavior. Subsequently, the child engages in modeling the behavior as well, in order to also be considered approved of, effective, and successful. The next step involves reinforcement, which has two types (Bethards, 2014; Burch, 2018). Intrinsic reinforcements are the internal feelings people experience, including pride, satisfaction, and a sense of accomplishment. In Tier 1 MTSS strategies, we employ such

reinforcements with all the students in the setting, this is the initial approach GE teachers should take to support students in the classroom with behavioral challenges in a way that will allow them to avoid needing to enter special education programming. Teachers employ strategies that involve modeling, observing, and reinforcing with all students (with/without disabilities in the general education classroom) while teaching and delivering instruction in a manner accessible to all students (Averill et al., 2011).

Another key concept of SCT is to teach students self-regulation. As children develop, they begin to learn self-control and to make their own decisions about engaging in appropriate behaviors, regardless of whether they receive external reinforcement. MTSS Tier 1 behavioral management (i.e., teaching the classroom rules) is significantly connected to the development of self-regulation; teachers instruct students in following the classroom rules and the students learn how to follow them by observing the teacher modeling the behavior of following the targeted rule. Once a student has begun to consistently engage in self-control in following the classroom rules, even when encountering a new setting or type of event, this is considered self-regulation (Kowalewicz & Coffee, 2014). In self-regulation, the process becomes more about goal setting and decision-making based on an understanding or expectation regarding consequences. These qualities arise from the individual, meaning the child makes independent decisions regarding what is suitable or what is not suitable behavior, based on having passed through the previous stages (Williams & Williams, 2010).

Another key concept of social cognitive theory is reciprocal determinism, which as previously discussed is Bandura's idea that the individual's behavior is not simply influenced by individual characteristics and the environment but that the reverse is also true, that these two things are influenced by the individual's behavior, as well (see Figure 2). This is termed a triadic

interaction and the components are: behavior, environment, and the individual. A real-world example of this phenomenon would be the situation involving the person who is afraid to fly (individual characteristic), who upon boarding a plane (environment) becomes visibly nervous (behavior), whereupon all the other passengers on the plane who perhaps are not fearful flyers become nervous due to the effect of the original individual's behavior (UK Essays, 2018).

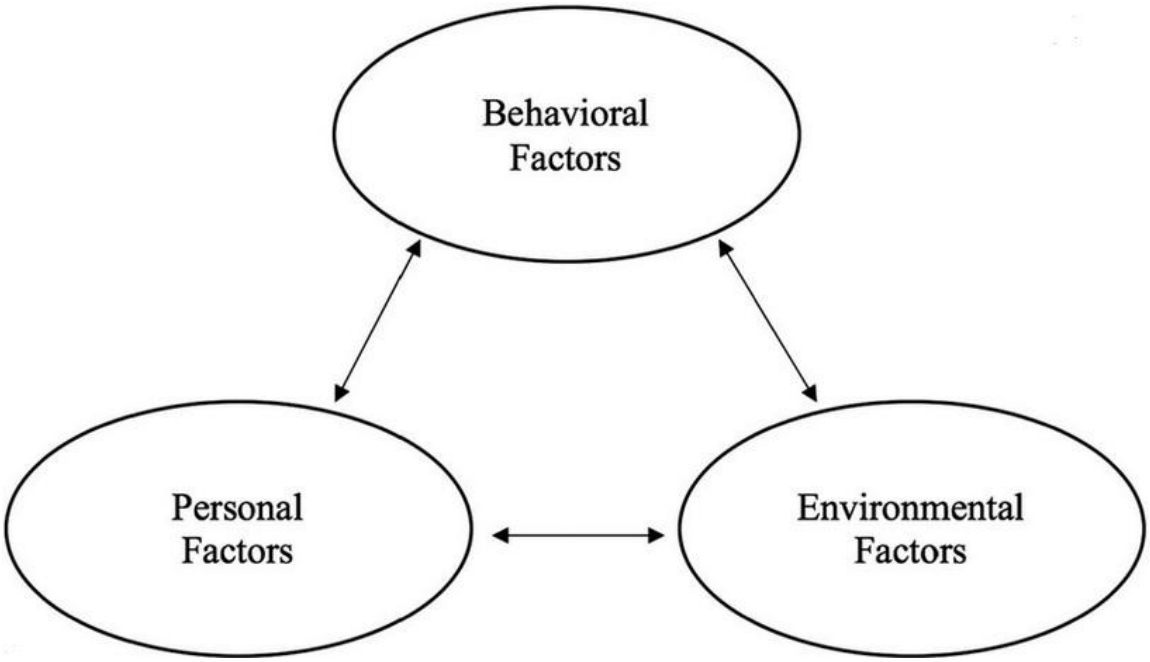

Figure 2. Reciprocal Determinism. From "The Self System in Reciprocal Determinism," by A. Bandura, 1978, *American Psychologist, 33*(4), p. 344-358. (doi:10.1037/0003-066X.33.4.344). Copyright 1978 by the American Psychological Association.

Many studies have confirmed the effective use of Bandura's observational learning model, which he established in 1961. Murphy et al. (2019) noted that observational learning can be a vehicle by which a student can effectively acquire a new behavior. In their MTSS Tier 1 behavioral intervention, the Good Behavior Game, they found that compliance with classroom rules can be achieved through the use of modeling, which results in increased rule-following behaviors and greater social interaction with peers by students with EBD in the general education

classroom. Another finding of this study was that it was also beneficial for teachers to reinforce the students consistently for following the classroom rules. Students received direct instruction from the teacher regarding classroom rules in addition to observing peers model the compliance skills. During direct instruction, techniques such as identifying examples and non-examples of students following classroom rules were provided followed by participation in role-playing, feedback, and specific praise. After the students with EBD observed their peers for one week, they joined one of three teams in the classroom. When the team followed the classroom rules, their names were posted on the board and they earned a selected reward. This study demonstrates Bandura's 1961 concept of observational learning; it included the three concepts: using a live model (classroom peers), delivery of verbal instruction for the skill (direct instruction), and the use of modelling to obtain the desired behaviors in the student (Murphy et al., 2019).

Another recent study that demonstrated the effective use of Bandura's observational learning model was conducted by Robinson-Ervin et al. (2016). In their work, first the teacher provided direct instruction on social skills to 12 students, half of whom were designated typical and half who had been diagnosed as having emotional and behavioral disorders. After the face-to-face instruction was presented, all the students completed lessons using the Culturally Responsive Computer-Based Social Skills Program. The computer-based intervention involved prerecorded social skills lessons with videos of peers displaying the social skill of following the directions of adults. The computer program began with a pre-test consisting of a series of questions about the importance of following adult directions. After each student completed the self-paced computer lessons, they proceeded to a post-test on the skills from the videos. Peer models were used in the videos to support the students with EBD and help them identify the steps necessary to perform the skills with mastery. Once all the students completed the computer

lessons, they role-played the skill of following adult directions. They created their own scripts for the role-playing and -- while classmates performed their scripts -- the other students observed and evaluated whether their peers were following the demonstrated steps. This study is an example of Bandura's observational learning as the students observed, modelled their peers, and imitated the social skills modelled. The added component of cognitive evaluation of the skills observed and the follow-up discussion of the skill used was included to promote generalization of skill development to other environments. The findings of this study were that students with emotional and behavioral disorders achieved a long-term increase in their ability to follow adult direction through this intervention. The Culturally Responsive Computer- Based Social Skills Program was employed with the whole classroom; thus, it is considered an MTSS Tier 1 intervention that supports all students' social skills.

Similarly, Zolkoski and Lewis-Chiu (2019) explored how Bandura's observational learning can be utilized to decrease a student's disruptive behavior through a Tier 1 MTSS behavioral intervention. The study involved a fifth-grade student with EBD being educated in the GE classroom. The intervention technique used was Mindfulness Breathing, which helps the student calm down when agitated so as to manage aggressive behavior. To implement the practice, the teacher asked all the students to observe as the steps of Mindfulness Breathing were demonstrated. All the students then did the steps that had been modelled. The steps were: (a) close your eyes, lie on your back, keep your legs flat, and put your arms to your side; (b) think of how you feel when breathing in and out and focus on your breath, think about how it feels as you take it in; (c) notice how you feel when you start breathing out; (d) breathe in and breathe out, practice breathing in and out three times; and, (e) when you are ready, open your eyes and sit up slowly. The teacher would then later prompt the student with EBD to recall and do the steps

when he was agitated so as to manage his behaviors. As a result of this observational learning model, the student with EBD demonstrated a 50% decrease in aggressive behavior (Zolkoski & Lewis-Chiu, 2019).

The Zolkoski and Lewis-Chiu (2019) study also examined the use of the technique titled Thought Watching as an MTSS Tier 1 strategy. To implement this practice, the teacher asked all the students to observe and model the teacher doing the steps. Once the students' attention was focused, the teacher verbalized each step as she demonstrated it. The steps consisted of: (a) begin by sitting or lying in a comfortable position; (b) sit quietly and focus on the rhythm of your breathing; (c) watch as your thoughts change (e.g., this was explained as visualizing the process as if one is standing in the hallway, watching people go by); (d) try to concentrate on watching what is happening in the moment; (e) once you have been able to stay with your thoughts in the moment, return your attention to your breathing; and (f) stay in position and keep watching your thoughts moving until you hear me say "Stop" (Zolkoski & Lewis-Chiu, 2019).

Additional components of observing, modeling, and imitating the teacher in the Thought Watching steps were used to support the student with behavioral challenges in regulating his anxiety. As indicated by Bandura's social learning theory, learning by observation is accomplished through the combination of four separate processes. The first is to gain the student's attention for what is going to be demonstrated by the model. Second, it is necessary to increase retention by having the student listen to the steps while they are also observing the model. Third, provide the student with the opportunity to reproduce the skill modeled. Last, the student with behavioral challenges is motivated and demonstrates the ability to manage anger and display necessary social skills.

Another component of MTSS Tier 1 behavioral intervention is to improve the self-efficacy of all students (Hoover-Dempsey, 2011). Bandura described self-efficacy as the belief of individuals regarding their ability and how that belief or understanding impacts the degree to which they perform, achieve, or learn; this is part of social learning theory (Schunk, 2012). Kurnia et al. (2017) employed the use of Find Someone Who (FSW) to improve self-efficacy and social skills. In the study, a group of students participated in an activity for enhancing communication. The children were divided into four heterogenous skill set groups. During the exercise, they were told to raise their hand and find a partner not in their group. One student in each group was required to ask a question from a worksheet they were provided and then to record the respondent's answer. The respondent was required to check and evaluate the answer, and then take a turn at answering the same question. After all students had completed the activity, they were directed to find a new partner and repeat the activity until all questions on the worksheet had been answered. When the activity was completed, the students returned to their seats. The researchers found that the students with disabilities demonstrated improved efficacy in continuing to communicate under difficult circumstances and showed improved long-term confidence.

Bandura (1989) proposed Social Cognitive Theory (SCT) as the means through which people manage the self-regulation of their thoughts, emotions, motivations, and actions. Researchers have found it is possible to teach self-regulation skills through role-play strategies that involve setting goals that allow students to improve behavior by learning to manage their thoughts and reactions to become self-directed. Smith et al. (2015) found that supporting the teaching of self-regulation skills helps students with EBD learn how to set behavioral goals in the GE classroom through working with other students. During the first two weeks of their study,

the students received goal-setting instruction from their teacher. They used a goal-setting graphic organizer while working in a group with their typical peers. The graphic organizer was provided to the students to track progress. Next, the teacher had the students role-play. Through observing, modeling, and imitating the target behaviors for achieving the behavioral goals as a group, the student with EBD became self-regulated and able to define and set a goal to achieve a good grade. This exercise supports Bandura's theory on how people can learn to control their own thought processes (Smith et al., 2015).

This study also examined modeling target behaviors, which is another strategy based in Bandura's ideas on self-regulation, as it explored how learning to identify triggers and the physiological feelings related to an emotion, such as anger, can help students understand how to predict they are becoming angry and use that prediction to self-regulate (Smith et al., 2015). Over the course of two weeks, all students received instruction on this. The teacher used a role-play activity and peer modelling to deliver the lesson by having one student act out an emotion and then having the student with EBD try control strategies. After the activity, the student with EBD was able to control anger using counting, distraction, and positive thoughts.

Effective Learning Environments

In the United States, students with challenging behaviors receive services in a variety of settings, such as special education resource rooms, self-contained institutional residential educational settings, and inclusive environments (Mathur & Jolivette, 2012). Researchers have identified the establishment of clear structures and guidelines for expected behaviors to be a necessary component for developing effective learning environments for all students (Burden, 2016; Evans et al., 2014). Effective structures and student accountability are best provided by elementary general education teachers who promote students' use of behavioral management

strategies (Freeman et al., 2015; Glock & Kleen, 2019). Rules are one form of communicating classroom expectations and constitute an important role in Tier 1 strategies of classroom management (Beazidou et al., 2013; Freeman et al., 2015).

Students with challenging behaviors often are not able to fully process classroom instruction due to issues with communication skills development. Kostewicz et al. (2008) identified certain important components of classroom behavioral intervention that support effective teaching, such as creating classroom rules. Prior to posting classroom rules, the school-wide behavioral expectations should be established. For example, expected behaviors should be phrased in a global, positive fashion and clearly posted. Such ideas might include expectations statements as be ready to learn; be a respectful classroom partner; and come to class prepared with all your materials. Similarly, rules regarding expected physical behaviors should also be posted clearly. These are stated in measurable and observable terms and might include positively stated phrases such as keep your hands and feet to yourself and raise your hand and wait to be called upon. Throughout this process, it is important that teachers keep in mind the special needs of students with challenging behaviors. Kostewicz et al. (2008) examined a class of 23 middle school students that included three students with challenging behaviors. The study found that there was little difference in the process for creating effective rules for students with challenging behaviors to that for creating rules for students who do not exhibit such behaviors. The rules creation process proposed by the study focused on the needs of students with challenging behaviors in the classroom and emphasized the need to pay special attention to the wording and number of rules implemented.

Positive Behavioral Interventions and Supports

Another study that supported the behavioral management strategy of classroom creation, was one conducted by Carter and Van Norman (2010), which recommended implementation of the PBIS system to create classroom rules in a general education classroom setting. The PBIS system is a tiered set of strategies that can be used to enhance the social-emotional development of students and prevent challenging behavior. This can be achieved through an initial meeting between classroom teachers and a PBIS consultant. During this meeting, at least an hour should be devoted to preparing information and sharing observations, as the PBIS consultant should act as an assistant to teachers in creating the classroom management rules. The elements of the meeting are: (a) establishing an effective environment; (b) working on efficient transitions; and (c) identifying appropriate/target behaviors. The consultation model provides support for classroom teachers, including individualized feedback on their specific classroom. In addition, consultation allows for positive and constructive feedback and provides time for teachers to reflect on classroom practices in a way that might not otherwise be possible should they be solely responsible for the process.

A study that investigated the relationship between utilizing PBIS and the academic achievement of students with special needs, found that the use of PBIS to address behavioral problems resulted in an improvement in students' academic achievement (Chitiyo et al., 2011). Similarly, Carter and Van Norman (2010) recommended several strategies for teachers to follow when creating an effective classroom environment, including: (a) always follow procedure; (b) post classroom routines in chart form; (c) use positive phrasing and related pictures; and (d) supply a classroom chart that includes behavioral expectations across classroom routines. When implementing these strategies, the successful teacher creates a setting where students of all

abilities will be capable of following the classroom rules easily. In addition to describing these effective strategies, Carter and Van Norman recommended that teachers allow for sufficient transitioning and processing time when presenting and enforcing classroom rules, such as using verbal signals before and after delivery to enhance the likelihood of obtaining the expected behaviors. The authors also recommended that teachers share the list of expected appropriate behaviors with other staff so that all are in agreement regarding the expectations for the classroom and the students; and, that all the instructors use positive language with all students.

Jeffrey et al. (2009) conducted a pilot study on updating the process for developing teachers' performance for providing feedback based on evidence-based classroom management practices for students with challenging behaviors, such as emotional support in regular classrooms. This study involved nine special education teachers working with students with challenging behaviors and found that teachers' evidence-based classroom management practices (e.g., clearly stating expectations and posting classroom rules) were positively related to students' on-task behavior. However, the study did not differentiate the results according to student gender. The study utilized a response-to-intervention model (Jeffrey et al., 2009). Another study, conducted by Rogers (2015), found that GE teachers can better manage student behaviors while providing instruction by giving them opportunities to practice and receive feedback, which is a recommended practice for preventing challenging behavior and managing behavior overall.

Characteristics of Students With Behavioral Challenges

The characteristics of students with behavioral challenges vary and include students who are identified as having or not having disabilities. The behavioral disorders are categorized as

including an emotional disturbance, which is determined under the Individuals with Disabilities Education Act (2004) as:

> A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: An inability to learn that cannot be explained by intellectual, sensory, or health factors; An inability to build or maintain satisfactory interpersonal relationships with peers and teachers; Inappropriate types of behavior or feelings under normal circumstances; A general pervasive mood of unhappiness or depression; A tendency to develop physical symptoms or fears associated with personal or school factors. (Algozzine, 2017, p. 136)

A study conducted by Denmark et al. (2019) with students who were both deaf and had Autism Spectrum Disorder (ASD), were found to have a greater incidence of emotional disturbance disorders. This study found that emotional disorders are diagnosed in this population as much as two or three times more frequently due to the differences in communication skills these students possess. An example of such a difference would be that some students with ASD who are deaf do not express negative emotions via the same range of communication methods as their hearing peers who do not have ASD. In addition, the Denmark et al. (2019) study showed that emotional and behavioral disorders are found in males more often than in females. Gage et al. (2017) and McLeskey et al. (2017) identified the common characteristics students demonstrate in school that are similar to those of emotional and behavioral disorders. The characteristics include such issues as: disrupt classroom activities; impulsive, inattentive, distractible, and/or preoccupied; do not follow or appear to care about classroom rules; and more (Gage et al., 2017; McLeskey et al., 2017; Rescorla et al., 2012). These are clearly common yet disruptive behaviors that general

education teachers must have the understanding to address in order to maintain a constructive classroom environment.

Use of Multi-Tiered Systems of Supports Tier 1 Strategies in the General Education Classroom

U.S. schools began implementing and adopting MTSS Tier 1 strategies to support students' social and academic outcomes over the last 10 years (Benner et al., 2013). The use of these first-tier strategies help schools promote prosocial behavior and academic skills of all students, but also decrease disruptive behaviors. These strategies are identified as the most common approaches for teachers to employ in the GE classroom (Benner et al., 2013; Rescorla et al., 2011). Clearly, these are valuable resources for general education teachers to employ to prevent and eliminate disruptive behaviors. However, these teachers need other resources to prepare them for the process of teaching students social skills and classroom expectations through PBIS strategies (Jolstead et al., 2017).

An exploratory study conducted by Jolstead et al. (2017) supported the use of Class-Wide Function-Related Intervention Teams (CW-FIT) as an MTSS Tier 1 intervention for implementing effective classroom management strategies that use PBIS practices. The authors used CW-FIT Tier 1 intervention as a group contingency utilizing social skills training, teacher praise, and positive reinforcement to improve student behavior. The main purpose of the study was to investigate the effects of CW-FIT on a student group's on-task behavior related to teacher praise and reprimand rates in four preschool classrooms. A single-subject delayed multiple baseline design was employed. The authors found that the intervention improved students' group on-task behavior and teacher praise-to-reprimand ratios.

The challenging behaviors of preschool and elementary school students can be a very difficult issue for teachers to address. As Campbell (2002) noted, these are the two levels where such behaviors are most common. However, it is the intensity, frequency, and co-occurrence with other behaviors which distinguish challenging behaviors from typical age-specific behaviors (Campbell, 2002). The most recommended intervention for reducing such behaviors is PBIS. If preschoolers exhibit actual disorders do not receive early intervention, they may exhibit more challenging behaviors later in life (Dunlap et al., 2006). As a result, their behaviors can negatively impact the safety and productivity of the learning environment (Carter & Pool, 2012).

Other research has focused on the importance of improving students' use of self-instruction. This model requires the teacher models self-statements that can be easily incorporated throughout the day in all content areas to direct behavior within a specific activity. To implement the self-instruction model for all students, application of orally coaching oneself through the steps in a given activity or assignment is done by the teacher. Students with challenging behaviors can often also show improvement through writing a list of specific self-instructions. These students can then refer to their personal list throughout the day and during different activities. Through this strategy, students with challenging behaviors identify key steps to follow for solving a problem or achieving an outcome. Once these steps are determined, the students can set goals for completing or mastering each individual step. In this way, students can monitor, evaluate, and reward their own behavior independently (Lane et al., 2006; Salend & Sylvestre, 2005).

Batsche (2013) noted that MTSS Tier 1 behavioral strategies focus generally on students' learning of both academic and behavioral expectations of the general education classroom. Moreover, Fred Balcom, the Director of the Special Education Division of the California

Department of Education (CDE), observed that MTSS emphasizes high-quality, evidence-based curricula and differentiated instruction to connect student's skills with the instruction provided (Barnes & Harlacher, 2008; CalSTAT and the CDE, 2013). Some examples of how to connect student skills with instruction are: (a) explicit instructional strategies, (b) a clear logical organization around an evidence-based learning continuum, and (c) identified instructional routines that provide opportunities for differentiation (D. Fuchs et al., 2012; Hughes & Dexter, 2011).

MTSS models are designed for use with curricula that can be used to instruct all students in the general education classroom. To connect the instruction with the students' skills, teachers require professional development to cultivate their skills in the delivery of such differentiated instruction. L. Fuchs and Vaughn (2012) noted that it can be difficult for teachers to use evidence-based curriculum if they are not well-prepared. The differentiation involves the teachers' ability to adapt the content, process, and products to meet the needs of each individual student, with or without disabilities. The acquisition and practice of these skills require administrators provide for professional development, planning time, and other training.

To explore how to implement differentiated instruction successfully, Allington (2013) conducted an investigation of how schools determine what reading materials to make available in their programs as well as how these materials are chosen (i.e., the basis for making the decision). What was uncovered is that there is a great deal of manipulation and corruption in the ways in which reading materials are marketing--and then purchased--by schools. The author found that regardless of the manufactured justifications for different non-evidence-based reading support programs, the methods that were most beneficial were ones that employed MTSS Tier 1

strategies that utilized evidence-based curriculum and materials that could be differentiated to meet the needs of the individual child.

Challenges to Effective Classroom Management

Being an effective classroom manager plays a significant role in teacher satisfaction. Researchers have identified a connection between teacher anxiety and teacher concerns when teaching students with challenging behaviors (Keavney & Sinclair, 1978). The authors found a connection between higher anxiety and lower levels of rapport and job satisfaction; thus, it is imperative that teachers have the opportunity to develop necessary skills, not just to be able to better meet the needs of students but also to experience greater job satisfaction. In other words, when teachers have positive feelings regarding their abilities in classroom management, they are better able to manage student behavior. Conversely, a lack of classroom management knowledge has been found to cause negative emotions when teachers encounter and deal with challenging behaviors in the classroom. More than 30 years ago, education researcher Joseph Blase (1986) noted teachers report that students' aggressive and disruptive behaviors are the most common causes of stress and depression. These issues are the ones teachers most often cite as disrupting classroom activities. In the present, Saudi elementary school general education teachers report they do not feel well-prepared by the professional development they have received in their pre-service training to manage the classroom when students with challenging behaviors are present (Al-Fatali, 2007; Alrwaily, 2016)

Duck (2007) sought to examine high dropout rates among new teachers. Specifically, Duck found that new teachers who quit teaching tend to cite a lack of understanding of effective classroom management practices, which is related to one's ability to develop an effective teaching style. Similarly, Stokking et al. (2003) examined methods to reduce high dropout rates

among new teachers. The study found new teachers indicate that one of the major issues they face when starting their teaching careers is the lack of preparation in the area of teaching classroom expectations and rules. These teachers also assert these issues could be mitigated by incorporating an intensive practice period in the final year of their initial teacher training. The authors of the study recommended providing such programming for pre-service teachers at educational institutions (Stokking et al., 2003). As well, Duck (2007) recommended pre-service and new teachers be exposed to the practices of teachers with longer experience, so that their more extensive knowledge can be passed along to their less experienced colleagues to provide a stronger introductory foundation in classroom management practices.

In 2014, Greenberg et al. reviewed the research on classroom management training and found numerous studies had noted the lack of such training on a national level in the United States; this was presented as specific proof of the need for the addition of instruction in classroom management for teacher training programs in Connecticut. Greenberg et al. (2014) also noted the need for classroom management skills in credentialing programs, citing multiple significant elements that contribute to the critical need for classroom management programs, including: (a) a lack of strategies that include how to use praise and opportunities to practice the demonstration of understanding (Webster-Stratton et al., 2011) and (b) a lack of instructors whose area of expertise is classroom management (Johansen et al., 2011). Comparing such findings to the current trends in Saudi education, this research found a similar lack of: (a) professional development training for teachers; (b) credential programs that explore classroom management; and, (c) professional instructors whose interest and area of expertise is the classroom environment (Al-Mousa, 2010).

Teachers often report difficulty with managing classroom behaviors problem. They note that they feel they do not have the skills to address certain common issues (e.g., verbal disruption, non-compliance, and being off-task); and also assert that these are the main contributors to job dissatisfaction and teacher burn-out (Alter et al., 2013). When instructors lack effective classroom management training, the classroom environment becomes problematic and a contributor to other negative issues, ones that may affect not just teachers but also students in the areas of social and academic outcomes (Algozzine et al., 2011; Ingersoll & Smith, 2003; Kokkinos et al., 2005).

There are few studies on the effect of teachers implementing classroom management rules in an inclusive GE classroom. Among these is research conducted by Bear (2014) that noted teachers often fail to make necessary adaptations to the inclusive classroom to meet the needs of individual students, particularly in the area of instruction delivery. In addition, educators have demonstrated a lack of training and background regarding how to meet the needs of all students in inclusive settings (Bear, 2014). Similarly, Carter and Van Norman (2010) reported limitations regarding the implementation of Positive Behavior Intervention and Supports (PBIS), which should be a universal practice; however, the data for their study were collected at the end of the school year, which prevented additional follow-up or consultation.

Benefits of Inclusion to Students With Behavioral Challenges

General research on classroom management has found that students with challenging behaviors tend to have social and academic challenges that impair their social interactions and academic performance (Didion et al., 2018). Students with challenging behaviors may fail to understand classroom instruction or be hindered in communications skills development (Ruhl et al., 1992). Due to a lack of materials and resources, elementary school general education teachers

who have students with challenging behaviors may struggle to successfully teach these students; the lack of professional development and training also prevents these teachers from supporting these students in a way that improves their academic and social development outcomes. Teachers also struggle to create effective learning environments and to utilize effective classroom management techniques (Alrwaily, 2016).

In Saudi Arabia, education law and policy requires that students with challenging behaviors (and other students with disabilities) be included in the general education classroom (Al-Mousa, 2010). Prior to the implementation of this law, researchers had found that most Saudi elementary school GE teachers were not aware of appropriate concepts to use in classroom management with their students who have challenging behaviors (Al-Fatali, 2007). Other research, including very recent studies, has supported the need for professional development to facilitate effective classroom management skills for teachers to employ with students with challenging behaviors and other students with disabilities (Sandilos et al., 2018).

Saudi elementary GE teachers report they do not feel well-prepared by the professional development they have received in this area (Al-Fatali, 2007; Alrwaily, 2016). Therefore, an important part of ensuring the inclusion of all students, as mandated by the Saudi Ministry of Education, is to be sure that teachers are given the opportunity to learn how to create successful, inclusive classrooms (Al-Mousa, 2010). If teachers are not trained in how to encourage positive behaviors and outcomes for all students, and especially those with emotional and behavioral issues, these children will continue to tend to exhibit poor learning outcomes (Al-Fatali, 2007). In Saudi Arabia, an emphasis on the importance of classroom management practices is part of a national effort to reform education and implement inclusion of all students with disabilities, including those with challenging behaviors, in the GE setting (Alrwaily, 2016).

Research has found that most Saudi elementary GE teachers are not aware of appropriate concepts for classroom management to use with their students who have behavioral challenges (Al-Fatali, 2007). Therefore, professional development to facilitate effective classroom management for students with behavioral challenges is needed. Saudi Arabian students with behavioral needs receive services in a variety of settings, such as special education resource rooms, self-contained educational settings, and inclusive environments (Mathur & Jolivette, 2012). Over 40% of new teachers surveyed reported feeling either "not at all prepared" or "only somewhat prepared" to handle students with a range of challenging behaviors (Greenberg et al., 2014). It has also been found that teachers are more likely to change the way they typically respond to students' misbehavior by establishing foundational behavior management strategies in cases where students with behavioral challenges are included in their classrooms (Coggshall et al., 2012; Farkas et al., 2003; San Francisco Unified School District & TNTP, 2014).

Limitations

To be an effective teacher, one must first master effective MTSS Tier 1 strategies, as well as acquire certain other effective classroom management skills, including being able to create a highly functional classroom environment where the classroom rules are clearly established in a manner that all students in the given class can understand, process, and follow (Wong & Wong, 2005). Such concepts should coherently present the tasks to be completed as well as any behavioral expectations (Wong & Wong, 2005). Previously, the U.S. educational system tended to have just one rather rigid and set approach to MTSS Tier 1, 2, and 3 systems that were deemed appropriate to apply to all classrooms, regardless of the ability or behavioral issues present. However, in recent years, greater emphasis has been placed on creating systems for the classroom that can be tailored to meet the needs of each individual student. This new emphasis

indicates how necessary it is for educators to put effort into creating an effective environment that delivers instruction successfully to all students, covering a diversity of needs and issues. It is important to understand that the concept of MTSS within classroom management is an umbrella term that covers all three tiers (Wong & Wong, 2005). For GE teachers who have students with challenging behaviors in their classrooms, it is critical to have a clear understanding of what MTSS strategies are, as well as how the inclusion of students with challenging behaviors might impact the classroom and how they can best support the learning of such students through effective Tier 1 strategies.

As the main goal of the MTSS is to implement evidence-based practices, some strategies in the field of education must be further researched and examined before they can be integrated into the curriculum as evidence-based. At the same time, if the implementation of the MTSS practices relies on other concepts and initiatives that have theoretical and empirical support, but only limited research supporting them, they may still be considered valuable for implementation in the MTSS system. Therefore, the basic fact is that there is a need for more research. MTSS provides a means to potentially advance these practices by promoting the alignment of initiatives (e.g., academic and behavioral supports) as well as the integration of supports across ecological systems (e.g., individual supports, classroom supports, school supports, and policy supports). In addition, there is a need for researchers to investigate MTSS in the areas of the academic and behavioral domains, while others should examine how to align high-quality instruction with social and emotional learning under the general MTSS model (Castillo et al., 2018; Chard et al., 2009).

Summary

This chapter presented a description and definition of classroom management and examined its importance as described by various researchers. It outlined existing research on classroom management, MTSS Tier 1 (and other) behavioral strategies, and examined studies that specifically explored the use of MTSS behavioral strategies to support students, especially those with behavioral challenges, in the general education classroom. This section also described the situation in Saudi Arabia regarding classroom management, inclusion practices, and other factors that indicate a gap in the research specific to Saudi. This gap involves the impact the lack of professional development and training in MTSS Tier 1 practices may have on the ability of Saudi elementary general education teachers to support the learning outcomes of all students, including those with challenging behaviors. The following chapter will present the details of the methodology employed to conduct the current study.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to investigate the knowledge and the use of Tier 1 strategies found in the MTSS literature by general education (GE) elementary school teachers when students with behavioral challenges were included in their classrooms. A secondary inquiry of the study was that once specific MTSS Tier 1 strategies were identified, to find if a correlation existed between strategy use and years of teaching experience. A tertiary examination was then performed to find out where the teachers learned those strategies. In this chapter, the methodology used to conduct the research study is presented. The chapter also presents the research design, demographics of the sample, sampling procedures, instrumentation, data collection procedures, data analysis and hypothesis testing, and limitations of the research.

Research Design

The current study utilized quantitative methods to investigate the knowledge and use of MTSS Tier 1 strategies by Saudi GE elementary school teachers regarding the best practice strategies found in the literature. Specifically, investigated was the knowledge and use of specific Tier 1 strategies when their classrooms included students with behavioral challenges. A quantitative, non-experimental survey design was used as a "means for testing objective theories by examining the relationship among variables" (Austin & Sutton, 2009, p. 4).

The survey was developed to investigate the self-reported knowledge and use of MTSS Tier 1 behavior management strategies by a group of Saudi GE teachers working in elementary

schools. According to Scheuren (2004), this type of survey is ideal for obtaining quantitative data from a large sample of a selected population. The instrument included descriptive survey items, which are commonly used in this type of research, and the survey was made available through a Qualtrics survey link to be easily accessed by mobile phone, iPad, and/or computer. A Qualtrics survey has several advantages. Besides ease of access, other benefits of using this survey method included the low cost, ability to obtain rapid responses, and ease of data analysis (through existing software). This design allowed participants to respond at their convenience, without the influence of an interviewer (Barnhoorn et al., 2015; Fraenkel et al., 2012).

Through the survey, the foundational information specific to the knowledge and use of Tier 1 behavioral management strategies by GE elementary school teachers in Saudi Arabia was identified. The teacher respondents reported whether they knew of the listed Tier 1 strategies and, if they responded that they did, they were then asked additional questions regarding where they had obtained that knowledge, whether they had employed the given strategy in their classrooms when students with challenging behaviors were present, and how often they had done so.

Population and Sample

Purposeful sampling rather than random was used to select the participants for this quantitative method research. This method allowed me, as the researcher, to target individuals in a specific sphere (Saudi Arabian general education elementary school teachers), and obtain in-depth information on the specific group in regard to the subject of interest (knowledge and use of MTSS Tier 1 behavioral management strategies (Creswell & Guetterman, 2019; Merriam, 2009; Patton, 2002).

Three selection criteria were utilized for this study: (a) all of the teachers had to teach in the Hail Region as licensed general education teachers in grades K-6; (b) teachers had students with behavioral challenges present in their classrooms; and (c) teachers had used at least one of the MTSS Tier 1 strategies. To locate participants who met these criteria, I contacted a colleague who worked as a regional coordinator in the Hail region of Saudi Arabia. This colleague assisted me in obtaining permission and in the dissemination of the survey link to teachers in the Hail Region. Once he received the link from me, he forwarded it, along with my request that they participate in the survey, to every elementary school teacher in the Hail region. Only data from teachers in this region employed as elementary teachers with students who displayed challenging behaviors in their classrooms were included in this study.

G*Power software version 3.1.9.6 was utilized to determine the appropriate size for the study sample. There are three effect size measures for an independent sample *t*-test: (a) small = 0.2, (b) medium = 0.5, and (c) large = 0.8 (Cohen, 2013). It is important that the researcher chooses the category of sample size that is most appropriate and best-aligned with the goals of the research. This is so that it is possible to generalize findings across a population as well as ensure that enough data are acquired from enough distinct respondents that the research questions can be fully addressed. It was determined that the most appropriate size for this research was medium effect size (0.5), which was chosen based on the recommendations of both Cohen (2013) and Dybå et al. (2006). These researchers stated that effect size should denote the effect observed for a given study topic, especially when there is no information about the participants' standardized effect size. Once the category of effect size had been chosen, G*Power was used to determine the specific number of respondents to recruit for an appropriate-sized pool. The result of the G* Power analysis indicated that 34 respondents was appropriate.

Instrumentation

The instrumentation for the study was a survey for elementary school teachers. The survey used for the study was administered to all elementary teachers in the Hail Region. The survey consisted of five sections (Appendix A), which included the consent form (see Appendix B) and general demographic questions, respondent's knowledge and use of MTSS Tier 1 behavioral management strategies, and where they had learned of the strategy. The survey was created and developed based upon the research literature most commonly identified evidence-based strategies employed in Tier 1 of the MTSS model (Benner et al., 2013; The IRIS Center, 2012; Levin & Nolan, 2014; Newman et al., 1980; Stoiber & Gettinger, 2016).

Measurement

Questions in the first section of the survey utilized a list of choices. Participants indicated their demographic information in questions 1-14. These questions included consent understanding, level of educational attainment, grade levels they had taught in the past and currently, total years of teaching experience, and age-range. In the second section of the survey respondents were asked to confirm that they understood the definition provided of students with challenging behaviors used for the survey. This definition was provided so all respondents would be using the same guideline of challenging behavior when they were addressing the use of strategy use. In the third, fourth, and fifth sections of the survey, the strategies were addressed in categories for clarity of analysis. The categories were grouped as shown on Table 1.

Table 1

Survey Question Categories

Foundational Management Strategies	Surface Management Strategies	Positive Consequences to Increase Behaviors	Using Negative Consequences to Correct Behaviors	Other Questions About Behavior Management of Expected Behaviors
1. Effective Guidelines for Classroom Rules	1. Redirection	1. Tangible Reinforcement	1. Reminder for Breaking Classroom Rules	1. Do you have a hierarchy of negative consequences
2. Positive Teaching of Procedures and Routines	2. Planned Ignoring	2. Rewards for Expected Behaviors	2. Taught Consequences for Breaking Classroom Rules	2. What do you use for reinforcement when reinforcing
				a. Whole class for dislaying expected behaviors?
				b. Individual students displaying expected behaviors
3. Positive Before Negative Strategies	3. Signaling	3. Reinforcement for Expected Behaviors	3. Negative Consequences to Decrease Challenging Behaviors	3. Write example steps for one procedure/routine that you explicitly teach.
	4. Proximity Control - Increasing the Distance		4. Explicit Reprimand	4. Write one example of social reinforcement that you use.
	5. Proximity Control - Decreasing the Distance			5. What information did I not ask that you feel is important for me to know about behavioral management strategies within the classroom?
	6. Interest Boosting			
	7. Removal of the Object			
	8. Antiseptic Boucncing			

The third section of the survey presented 24 Tier 1 best practices strategies. Initially, respondents identified whether or not they were knowledgeable about each strategy. If respondents confirmed they were knowledgeable about the strategy, a Likert-type scale was used to determine where they obtained their knowledge on how to use the strategy. Respondents were asked to respond by using the following choices: 1 = *I only heard of it, I do not know how to use it;* 2 = *a website on the Internet;* 3 = *a colleague shared it;* 4 = *I read about it in a book;* 5 = *a university class;* 6 = *a workshop in behavior management;* and 7 = a *professional development*. If the respondent selected 1= *I only heard of it, I do not know how to use it,* they were directed to the next strategy. If they selected any of the other choices, they were directed to address their perception of frequency-of-use in their classroom. For frequency-of-use, respondents were asked to respond by selecting one of the following choices: 1 = *Never*, 2 = *Once a Week,* 3 = *2-3 Times a Week,* and 4 = *3-5 Times a Week*. The questionnaire items were derived from research of evidence-based practices commonly used in Tier 1 of the MTSS model (Benner et al., 2013; The IRIS Center, 2012; Levin & Nolan, 2010; Stoiber & Gettinger, 2016).

In the fourth section of the survey, eight questions were used to determine the respondent's perception of their use of foundational behavior management strategies as identified in the research literature. The respondents were asked to respond if and how they used the following behavior management strategies: the creation, teaching, and reinforcement of classroom rules; explicit teaching of procedures/routines; and use of positive and negative consequences. If they confirmed they used these in their classroom, they were asked to provide an example. In the fifth section of the survey, the respondents were asked to add information that they felt was important for the researcher to have about behavioral management strategy use

within the classroom. This allowed them to add comments regarding issues and aspects that they felt were missing from the survey questions.

Validity and Reliability

For an instrument to be valid and reliable, it needs to be consistent in each of its applications and measure accurately what it is intended to measure (Lunenburg & Irby, 2008). Since the respondents were Arabic-speakers and readers, accessibility of the survey and establishing content validity needed to be ensured. The instrument was translated into Arabic in a way that ensured the same meaning of the original, English-language instrument was maintained. As recommended by Mason (2005), the Arabic version of the survey was checked by a general education elementary school teacher with expertise in general education curriculum in Saudi Arabian elementary schools. This expert holds a bachelor's degree in Arabic Language Studies and a master's in Education Technology. This translation ensured that the survey's wording also conformed with school culture and employed terminology commonly used by the intended participants--Saudi general education elementary school teachers. Reliability of the survey data was determined as part of the current study and the results are reported in the Chapter IV.

Data Collection Procedures

Permission was obtained in a two-fold process. First, to ensure the confidentiality and human rights were adhered to for the individuals participating in the study, Institutional Review Board approval from the University of Northern Colorado was initiated and received (see Appendix C). Also, written permission was obtained from the Hail School District to conduct the study with teachers (see Appendix D). Once the data were collected; the responses were kept confidential and all results were reported as congregate. In this way, individual responses were

not identified, and personally identifiable information was omitted. All identifying information was stripped from the data and the data were/are stored in a password-protected electronic file.

After reading the consent form, participants who indicated their willingness to proceed with the survey clicked on a link that took them into the questionnaire. To ensure that participants had knowingly provided consent, they were asked to click on the option that stated, "*Yes, I have read and understood these terms. I provide my consent and agree to participate in the survey*." Once a participant's consent was ensured, they were moved on to answer the demographic questions.

After receiving written approval from the UNC Institutional Review Board and the Hail School District, the researcher sent an email to the GE regional coordinator to disseminate the survey to all Saudi GE elementary schools teachers working in the Hail Region School District. Through this email, potential respondents were informed by the GE regional coordinator that they had an opportunity to participate in the survey either on their phone, computer, and/or tablet during the three weeks following the date they received the survey. Potential respondents were asked to complete the survey and consent form digitally through the Qualtrics' link as provided to them through the GE coordinator. Three weeks after the date of the dissemination of the survey, the researcher sent a follow-up reminder to the potential participants to remind them to complete the survey. Then, one week later, the survey link was closed. It was established that of the 280 teachers who were sent the link, 106 total individuals responded to the Qualtrics survey, which was more than the number of respondents required for the G*Power analysis criteria. The data were organized and processed using Statistical Package for Social Sciences (SPSS) version 23.0, for data analysis. SPSS allows for a wide range of analyses, as described by Wagner (2019).

Data Analysis and Hypothesis Testing

To establish that respondents perceived that they had students who displayed challenging behaviors in their classrooms, they were asked to confirm the presence of students who met the definition given of challenging behavior. This addressed Research Question 1, which was:

Q1 Do general education elementary teachers in Saudi Arabia perceive that they have students with challenging behaviors in their classrooms?

For Research Question 2, a dichotomous response described the degree to which the respondent felt knowledgeable of the strategy presented. The choices were: 1 = *I know about this strategy*, or 2 = *I do not know about this strategy.* This response was used to address Research Question 2:

Q2 Do general education elementary teachers in Saudi Arabia have knowledge about Tier 1 behavioral strategies?

If the respondent indicated their knowledge as "*I know about this strategy*," they were asked to use a 7-point Likert-type scale to best describe the depth of their knowledge of the strategy. The Likert-type scale was as follows: 1 = *I only heard of it I do not know how to use it*; 2 = *a website on the Internet*; 3 = *a colleague shared it*; 4 = *I read about it in a book*; 5 = *a university class*; 6 = *a workshop in behavior management*; and 7 = a *professional development*. If the respondents stated they did not know about the strategy, they were directed to the next strategy and were not included in the analysis for this specific strategy. If the respondent selected 2, 3, 4, 5, 6, or 7, they were directed to another scale where they were asked to indicate the strategy frequency-of-use in their classroom. The frequency-of-used was as follows: 1 = *Never*; 2 = *Once a Week*; 3 = *2-3 Times a Week*; 4 = *3-5 Times a Week*. For Research Question 3, which is presented below, the respondents were presented with a series of closed-ended questions about the specific MTSS Tier 1 strategies that they use with students.

Q3 Do general education elementary teachers in Saudi Arabia use specific Tier 1 behavioral strategies in their classroom when students with challenging behaviors are present?

To answer the third research question, respondents were asked through a series of questions about the specific MTSS Tier 1 strategies that they use with students. These questions were presented by category for clarity of analysis: Use of positive reinforcement with a whole class of students; Use of positive reinforcement with individual students; Use of social reinforcement to encourage students to comply with classroom rule-following; Use of negative consequences; and Whether they use a hierarchy of negative consequences.

Q4 Where do general education elementary teachers in Saudi Arabia learn how to use the specific Tier 1 behavioral strategies?

If the respondent indicated their knowledge as, "*I know about this strategy*," they were asked to use a 7-point Likert-type scale to describe the depth of their knowledge. The Likert-type scale was presented in categories for clarity of analysis and were: Sources of Learning for the Foundational Management Strategies; Sources of Learning for the Surface Management Strategies; Sources of Learning for the Positive Consequences Strategies; Sources of Learning for the Negative Consequences Strategies

Q5 How does the relationship between regular use of specific Tier 1 behavioral strategies when students with challenging behaviors are included in general education elementary teachers' classrooms in Saudi Arabia differ among their years of teaching experience?

Hypothesis testing was used to answer Research Question 5 to determine whether there was any relationship between the respondents' perceptions of strategy knowledge, their strategy use, and the respondents' years of teaching experience. Using SPSS, a chi-square test of independence was used to test Hypothesis 1. The observed frequencies were compared to those expected by chance. The level of significance was set at .05.

H1 There is a relationship between the perceived knowledge and use of specific Tier 1 behavioral strategies by elementary general education teachers in Saudi Arabia and their years of teaching experience.

Limitations

Limitations are those factors in a study that "may have an effect on the interpretation of the findings or on the generalizability of the results" (Lunenburg & Irby, 2008, p. 133). The limitations of this study are as follows:

1. The honesty of the respondents will play an important role in the accuracy of the collected data. The researcher tried to account for this limitation by sequencing the questions to continue into a hierarchy of depth regarding strategy use. This design was employed in the hope that the respondents would be more likely provide evidence that the information provided was accurate and in congruence with their stated knowledge.

2. The sample consisted of teachers from the northern region of Saudi Arabia and may not be reflective of teachers' knowledge and use of MTSS Tier 1 behavioral management strategies in other regions. Therefore, since the participants in this study were from the northern region, the results are only relevant to the training received and available in that area. In the future, surveys on this topic will be distributed throughout other regions of Saudi for comparison.

Summary

This chapter again presented the study's purpose, which was to determine whether general education elementary school teachers in Saudi Arabia have knowledge of and use MTSS Tier 1 behavioral management strategies when students with behavioral challenges are present in their classrooms. This chapter also presented and explained the quantitative research design, as well as restated the five research questions and presented Hypothesis 1 for Research Question 5. The sampling procedure was purposive, including teachers from the Hail Region School District

in Saudi Arabia. A 98-question survey consisting of five sections was used to measure the variables as presented. The five sections included ones which acquired demographic information, the presentation of the definition of students with challenging behaviors, identification of knowledge and use of the 24 identified Tier 1 best practices strategies, determination of respondent use of foundational behavior management strategies, and an additional request for information about behavioral management strategy use within the classroom that the respondents felt was important for the researcher to have but that had been omitted by the researcher from the survey. Data analysis and hypothesis testing were explained through the use of chi-square. Finally, this chapter presented the limitations of the study. The results of the data analysis are presented in Chapter IV.

CHAPTER IV

RESULTS

The purpose of this study was to investigate the knowledge and use of Tier 1 strategies found in the MTSS literature by Saudi GE elementary school teachers when students with behavioral challenges are included in their classrooms. The researcher gathered demographic information on the respondents' level of education, age, grade level(s) taught, and years of teaching experience. Also solicited was information on knowledge of specific MTSS Tier 1 strategies, use of specific MTSS Tier 1 strategies, and the source of the respondents' knowledge of the specific strategies.

Demographic Section of the Survey

The survey link was sent by the regional coordinator to all elementary GE teachers in Saudi Arabia employed within the Hail Region School District. A total of 280 teachers were sent the link and of those, 106 responded. Using certain established criteria, the final number of teachers whose responses would be included in the data analysis was determined. The criteria for study inclusion were three-fold: respondents had to be qualified to teach elementary grade level students in the Hail Region School District; respondents had to confirm that they had students with behavioral challenges included in their classrooms; and respondents had to state that they knew of and used at least one of the identified MTSS Tier 1 strategies listed in the survey. When the survey closed, the data were downloaded, and frequency and percentage analyses were run to determine the number of respondents that met the criteria for inclusion in the study. Through this

process, it was established that of the 106 total individuals who responded to the Qualtrics survey, 95 met the criteria for inclusion in the study.

Inclusion in the Study

A breakdown of the number of teachers as related to each of the three criteria is shown on Table 2. Ninety-five respondents confirmed they met the criterion of being currently qualified to teach in the Hail Region School District. Using the definition presented of students with challenging behaviors, the same number of respondents confirmed they had such students included in their classrooms. Finally, these 95 respondents also indicated that they had knowledge of at least one of the Tier 1 MTSS strategies presented in the list. By answering in the affirmative to at least one strategy knowledge question, the respondents met the study's final inclusion criterion, and their responses were included in the analyses.

Table 2

Frequency and Percentage of Selection Criteria

Selecton Criteria	*f*	%
Teach Elementary Lelve in Hail Regtion		
Yes	95	100
Inclusion of Students with Behavioral Challenges		
Yes	95	100
Know at Least One MTSS Tier 1 Strategy		
Yes	95	100
Total Respondents	95	100

Level of Education

Of the total respondents who met the inclusion criteria, all had obtained at least a bachelor's degree in education from a university in Saudi Arabia. The content areas of the respondents' bachelor's degrees varied: (a) 2 had degrees in English; (b) 3 had degrees in Mathematics; (c) 2 had degrees in Art; (d) 5 had degrees in social studies; (e) 10 had degrees in Science; (f) 51 had degrees in the Arabic Language; (g) 10 had degrees in History; (h) 12 had degrees , (i) 10 in mathematics; (j) 1 had a degree in Islamic studies; and (k) 1 respondent was in early childhood. Additionally, of the 95 total respondents, 4 indicated they had also earned master's degrees, which were in the areas of Home Economics (n = 1), Islamic studies (n = 1), Mathematics (n = 1), and Early Childhood Education (n = 1).

The demographic information of the 95 respondents included in the study is shown on Table 3. This section also established respondents' previous and current elementary grade levels taught, years of teaching experience, and age. Gender was not included in the requested information as it was already known that the majority were female with very few, if any, males. Descriptive statistics, frequencies, and percentages on these demographic variables are described in this section.

Table 3

Frequencies and Percentages of Total Years of Teaching and Grades Taught

Demographic Characteristic	*f*	%
Total Years Taught		
5 years or less	24	25.26
6-10 years	20	21.05
11 or more years	51	53.68
Grade Level Taught		
Kindergarten	9	9.47
First Grade	29	30.53
Second Grade	20	21.05
Third Grade	29	30.53
Fourth Grade	49	51.58
Fifth Grade	69	72.63
Sixth Grade	66	69.47

Note. $N = 95$.

Elementary Grade Level Taught

The grade levels the respondents teach, previously and currently, are shown on Table 3. For the kindergarten level, 9 (9.47%) of the total participants indicated this as the only grade level they taught. For the first grade, 29 (30.53%) of the respondents indicated that they had taught this grade for 11 years or more. At the second-grade level, 20 (21.05%) respondents indicated that this was the grade they were currently teaching, while 29 (30.53%) of the respondents indicated they were teaching at the third-grade level. A total of 49 (51.58%) respondents indicated that they currently teach fourth grade, and 69 (72.63%) of respondents

stated they had previous experience teaching the fifth grade. Finally, 66 (69.47%) of respondents had previous experience teaching at the sixth-grade level (see Table 3).

Respondents' Years in Teaching

Of the 95 respondents, 24 (25.26%) had 5 years or less of teaching experience. Twenty (21.05%) of the teacher respondents had 6-10 years of teaching experience. Last of all, a total of 51 (53.68%) of the teacher respondents reported 11 or more years of teaching experience (see Table 3).

Respondents' Age

A breakdown of the number of teachers who responded in the survey identified their age across the ranges shown in Table 4. Among the 95 respondents, 2 (2.11%) of the respondents were in the age range of 21-25, 19 (20.0%) were in the age range between 26-30, 29 (30.53%) were in the age range of 31-35, 20 (21.05%) were in the age range of 36-40, 15 (15.79%) were in the age range of 41-46, and 10 (10.53%) were in the age range of 46 and older who responded to this question.

Using the data collected from the 95 respondents who met the criteria and were included in the study, the five research questions are addressed next. Descriptive analysis frequencies and percentages are presented for Research Questions 1 through 4. The chi-square test of independence and hypothesis for Research Question 5 are described in the results of the data analysis.

Table 4

Frequencies and Percentages of Demographic Characteristics Within Sample

Demographic Characteristic	*f*	%
(21-25)	2	2.11
(26-30)	19	20.00
(31-35)	29	30.53
(36-40)	20	21.05
(41-46)	15	15.79
46 Years Old and Older	10	10.53
Total	95	100.01 *

* The total percentage is slightly more than 100% due to rounding.

Perception of the Inclusion of Students with Challenging Behaviors

Q1 Do general education elementary teachers in Saudi Arabia perceive that they have students with challenging behaviors in their classrooms?

To answer the first research question of the study, the survey began with providing a definition of students with challenging behaviors. This was to ensure that the respondents answered all research questions with universal clarity of the term. The definition provided for a student with challenging behavior was: A student who displays challenging behavior is one who on a regular basis, engaged in behaviors that distracted from their own learning and disrupted the learning of others (Pechacek & Ehlers, 2019). If respondents perceived that their classrooms include students who exhibit challenging behaviors, specifically, behavior that distracts from their own and others' learning, this response was tallied as answering Research Question 1 in the affirmative. The 95 teachers whose responses were included in the study all confirmed that,

according to the definition provided, they perceived that they had students with challenging behaviors in their classrooms.

Knowledge of Multi-Tiered System of Supports Tier 1 Strategies

Q2 Do general education elementary teachers in Saudi Arabia have knowledge about Tier 1 behavioral strategies?

To answer the second question of the study, the respondents were asked whether they had knowledge of 24 specific strategies that, through the literature review, were identified as the strategies most commonly used in Tier 1 of the Multi-Tiered System of Supports (MTSS) model used by educational programs. The researcher reported the data from the respondents' answers regarding knowledge of MTSS Tier 1 strategies to arrive at the frequency and percentage of teachers who had knowledge of each listed MTSS Tier 1 strategy.

Knowledge of Foundational Behavioral Management Strategies

The teacher respondents were first asked to indicate whether they knew about the foundational behavioral management strategies. Foundational behavioral management strategies are those that lay the groundwork for preventative and proactive strategies teachers will have in place as soon as students enter the classroom. The strategies provided clarity of the expected behaviors and how the teacher will respond to students who are not compliant. As shown in Table 5, out of the 95 teacher respondents, 18 (18.95%) teachers indicated that they knew about the Use of Effective Classroom Rules strategy, 13 (13.68%) teachers indicated that they knew about Use of Positive Before Negative Strategies, and 19 (20.00%) teachers indicated that they knew about the Explicitly Teaching Procedures/Routines strategy.

Table 5

Frequency and Percentage of Knowledge of Foundational Behavior Management Strategies

	f	%
Use of Effective Classroom Rules	18	18.95
Use of Positive Before Negative Strategies	13	13.68
Explicitly Teach Procedures/Routines	19	20.00
Total	50	53.63

Note. $N = 95$.

Knowledge of Surface Management Strategies

Respondents were next asked to indicate whether or not they knew about Surface Management Strategies. Surface Management Strategies are the simple, non-intrusive ways teachers respond to minor disruptive behavior without interrupting classroom instruction. The literature review identified eight strategies, grouped in this section as Surface Management Strategies, which were commonly used by teachers in Tier 1 of the MTSS model (Levin & Nolan, 2014). As shown on Table 6, out of the 95 teacher respondents, a total of 24 (25.26%) teachers indicated that they knew about the *Redirection* strategy, and 49 (51.58%) indicated that they knew about the *Planned Ignoring* strategy. Twenty-two (23.16%) of the teachers indicated that they knew about the *Signaling - Non-verbal* strategy, 19 (20.00%) indicated that they knew about Proximity Control - Decreasing the Distance strategy, 14 (14.74%) indicated that they knew about Proximity Control - Increasing the Distance strategy, 22 (23.16%) teachers indicated that they knew about the Interest Boosting strategy, 40 (42.11%) teachers indicated that they knew about the Removal of the Object strategy, and 16 (16.84%) teachers indicated that they knew about the strategy titled, Antiseptic Bouncing.

Table 6

Frequency and Percentage of Kowledge of Surface Management Strategies

	f	% *
Redirection	24	25.26
Planned Ignoring	49	51.58
Signaling – Non-verbal	22	23.16
Proximity Control - Decreasing the Distance	19	20.00
Proximity Contraol - Increasing the Distance	14	14.74
Interest Boostimg	22	23.16
Removal of Object	40	42.11
Antispetic Bouncing	16	16.84

* Percentages were determined based on the total number of respondents ($N = 95$).

Knowledge of Positive Consequences

The survey asked the teacher respondents to identify whether they knew of strategies for using positive consequence*s* to increase behaviors. Out of the total respondents, 50 (52%) teachers indicated that they knew about the Providing Reinforcement for Expected Behavior strategy, 47(49%) teachers indicated that they knew about the Providing Rewards for Expected Behavior strategy, and 42(44%) teachers indicated that they knew about the Providing Tangibles for Doing the Expected Behavior strategy (see Table 7).

Table 7

Frequency and Percentage of Knowledge of Positive Consequences

	f	% *
Providing Reinforcement for Expected Behaviors	50	52.63
Providing Rewards for Expected Behavior	47	49.47
Providing Tangibles for Doing the Expected Behavior	42	44.21

* Percentages were determined based on the total number of respondents ($N = 95$).

Knowledge of Negative Consequences

Respondents were asked to indicate whether they had knowledge of strategies for Using Negative Consequences to correct behavior. Out of the total respondents, 10 (10.53%) teachers indicated that they knew about the *Using Negative Consequences for Challenging Behavior* strategy, a total of 25 (26.32%) teachers indicated that they knew about the Using Rule Reminder strategy. Fifty (52.63%) teachers indicated that they knew about the Explicit Reprimand strategy, and 36 (37.89%) teachers indicated that they knew about teaching students what the consequences would be for a rule infraction (i.e., Taught the Consequences of Breaking the Classroom Rules; see Table 8).

Table 8

Frequency and Percentage of Knowledge of Negative Consequences

	f	% *
Using Negative Consequences for Challelnging Behavor	10	10.53
Using Rule Reminder	25	26.32
Explicit Reprimand	50	52.63
Taught the Consequences of Breaking the Classroom Rules	42	44.21

* Percentages were determined based on the total number of respondents ($N = 95$).

Use of Specific Multi-Tiered System of Supports
Tier 1 Behavioral Strategies

Q3 Do general education elementary teachers in Saudi Arabia use specific Tier 1 behavioral strategies in their classroom when students with challenging behaviors are present?

In order to obtain answers to the third research question of the study, the respondents were presented with a series of questions about the specific MTSS Tier 1 strategies they use with students. The series of questions initially focused on the teacher respondent's use of positive reinforcement with a whole class of students, then reinforcement with individual students, and finally their use of social reinforcement to encourage students to comply with classroom rule-following. The second set of questions asked the teacher respondents about their use of negative consequences and whether or not they used a hierarchy of negative consequences when they had students with challenging behaviors in their classroom.

The researcher identified and reported the frequencies and percentages from the respondent's answers to their use of specific MTSS Tier 1 strategies. The 95 respondents were first asked to address their use of positive foundational behavior management strategies for students who complied with expected behaviors. A choice of ways teachers reinforce a whole

class of students when they behave as expected allowed for selections. The first selection available was that teachers did not believe they needed to provide reinforcement when students behaved as expected. Twenty-three (24.21%) chose this response. The frequencies of the teacher respondent's use of reinforcement strategies when the whole class behaved as expected are reported on Table 9. A total of 45 (47.37%) teacher respondents identified that they gave the whole class global verbal praise when they behaved as expected and 24 (25.26%) used the strategy of giving specific verbal praise to their class on how they behaved. Eight (9.47%) of the teacher respondents indicated they used non-verbal reinforcement when their students behaved as expected, and finally, 18 (18.95%) provided the whole class with a tangible reward after they behaved as expected (see Table 9).

Table 9

Reinforcement for the Whole Class for Behaving as Expected

	f	% *
I do not believe I have to reinforce students for behaving as expected	23	24.21
The whole class receives global verbal praise	45	47.37
The whole class receives a specific verbal praise	24	25.26
The whole class receives non-verbal reinforcement	8	9.47
The whole class receives a tangible reward	18	18.95

* Percentages were determined based on the total number of respondents ($N = 95$).

The second series of questions about teacher respondent MTSS Tier 1 strategy use was focused on reinforcement of individual students who behaved as expected. As with the whole classroom reinforcement, the respondents were presented with the first option of not providing individual students with reinforcement for behaving as expected. As shown on Table 10, of the

95 teacher respondents, 22 (23.16%) respondents indicated that they did not believe they should reinforce students for behaving as expected. A total of 39 (41.05%) respondents chose the option, the individual student receives global verbal praise. Next, 28 (29.47%) respondents chose the option, the individual student receives a specific verbal praise; and a total of 10 (10.53%) respondents chose the option, the individual student receives non-verbal reinforcement. The last option was the individual student receives a tangible reward, which was chosen by 24 (25.26%) respondents who indicated they gave a tangible reward to reinforce students who behave as expected. This information is presented on Table 10.

Table 10

Reinforcement for Individual Students for Behaving as Expected

	f	% *
I do not believe I have to reinforce students for behaving as expected	22	23.16
The individual student receives global verbal praise	39	41.05
The individual student receives a specific verbal praise	28	29.47
The individual student receives non-verbal reinforcement	10	10.53
The individual student receives a tangible reward	24	25.26

* Percentages were determined based on the total number of respondents ($N = 95$).

Respondents were then asked to identify their use of social reinforcement to encourage students to do the expected behavior. A total of 24 (25.26%) respondents indicated that they do not use or do not believe students need social reinforcement to do expected behaviors. If respondents did not state whether they used a strategy, they were moved to the next section of the survey at that point and did not continue with questions on social reinforcement. Seventy-one (74.74%) respondents indicated that they used social reinforcement to help their students do the

expected behaviors (see Table 11). When this response was given, these respondents were then directed to the next question, which asked for one example of social reinforcement they provided. Responses from 10 respondents were reported, and included: (a) verbal praise, (b) good job for doing the targeted behavior, (c) gifts, (d) announcing the student's name in the morning, (e) putting the excellent student's picture on the board, (f) writing the student's name on the board in the classrooms, and (g) making a call to the excellent student's home.

Table 11

Use of Social Reinforcement to Encourage the Expected Behavior

	f	% *
No, I do not use or believe students need social reinforcement to do th expected behavior	24	25.26
Yes, I use social reinforcement to help my lstudents do the expected behavior	71	74.74
Total	95	100.00

When respondents were asked about using negative consequences to correct behavior, they were given one of two options. The first option, chosen by 78 (82.11%) of the teachers, was: No, I do not use negative consequences at all. Eight (8.42%) chose the second option which was: Yes, I use negative consequences to correct behavior. Those eight respondents were then directed to the next question, where they were asked to choose one between: I do not use a hierarchy of negative consequences or I use a hierarchy of negative consequences. Here, if they chose the latter, they were then asked to upload the hierarchy they use. Nine (9.47%) said that they use negative consequences but do not use a hierarchy (see Table 12). As noted, the respondents who indicated that they use a hierarchy were asked to upload that hierarchy; however, these respondents did not upload hierarchies and instead noted only two items: (a)

retain students in building during recess times, and (b) send students to the principal (remove from the classroom).

Table 12

Use of Negative Consequences to Correct Behavior

	f	% *
No, I do not use negative consequences at all	78	82.11
Yes, I use negative consequences when a student misbehaves	8	8.42
Total	95	100.00

The respondents were next asked to indicate if they, Explicitly teach procedures or routines in their classroom. Regarding this question, 19 (20%) respondents answered this by choosing YES, while 76 (80%) of the respondents responded to this question with NO. These findings are presented on Table 13.

Table 13

Explicitly Teach Procedures or Routines

	f	%
Yes	19	20.00
No	76	80.00
Total	95	100.00

Sources of Teachers' Knowledge of the Use of Multi-Tiered System of Supports Tier 1 Strategies

Q4 Where do general education elementary teachers in Saudi Arabia learn how to use the specific MTSS Tier 1 behavioral strategies?

If respondents moved answered that they knew of the strategy listed, they were then sent to this section of the survey where they were asked to identify where they learned of the particular strategy. The respondents were asked to identify where they learned about the strategy by selecting from seven different options, which were: 1 = *I have only heard of it, I do not know how to use it*; 2 = *A website on the Internet*; 3 = *A colleague shared it*; *4 = I read about it in a book*; 5 = *A university class*; 6 = *A workshop in behavior management*; and 7 = *A professional development.* Any respondent who selected "1" (*I have only heard of it, I do not know how to use it*), was directed to the next strategy. For each specific MTSS Tier 1 behavioral strategy that teachers indicated they knew, frequency tabulation and percentages were reported on where they learned how to use each one.

Where Teachers Learn How to Use Foundational Behavior Management Strategies

The respondents who stated they knew about Foundational Behavior Management strategies were asked to identify where they had learned about them. For Use of Effective Classroom Rules, one (1%) of the respondents indicated they had only heard of the strategy, and seven (7.37%) indicated that they learned how to use this strategy from a website. Nine (9.47%) of the respondents stated they learned how to use it from a colleague, five (5.26%) from a book that they had read, and three respondents (3.16%) cited a university class as their source of knowledge. The remaining respondents stated they had learned about it at a workshop they

attended (n = 9; 9.47%), and two (2.11%) respondents indicated that they learned this strategy during a professional development event (see Figure 3).

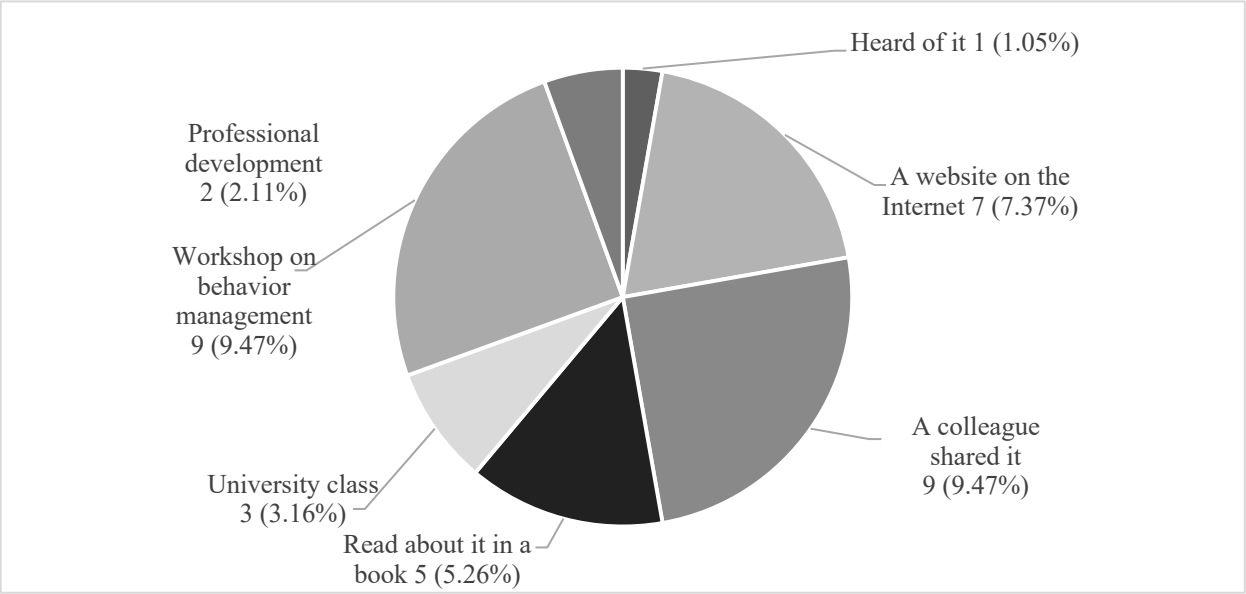

Figure 3. Frequency and percentage on where teachers learn how to employ use of effective classroom rules.

The next strategy that was investigated to determine where respondents had obtained their knowledge about using it was, Using Positive Before Negative Strategies**.** Only one (1.05%) respondent was immediately redirected to the next strategy because they said that they had only heard of the strategy. Moreover, none of the respondents indicated that they had learned about this strategy from a website on the Internet. A total of two (2.11%) respondents learned about how to use it from a colleague, four (4.21%) indicated that they had learned about how to use this strategy from a book that they had read, two (2.11%) stated that they had learned about this item in a university course, six (6.32%) in a workshop, and only two (2.11%) of the respondents indicated that they learned how to use this strategy from a professional development

(see Figure 4). None of the 19 (20.0%) respondents who indicated they knew of the strategy Explicitly Teach Procedures or Routines, identified from where they learned how to use it.

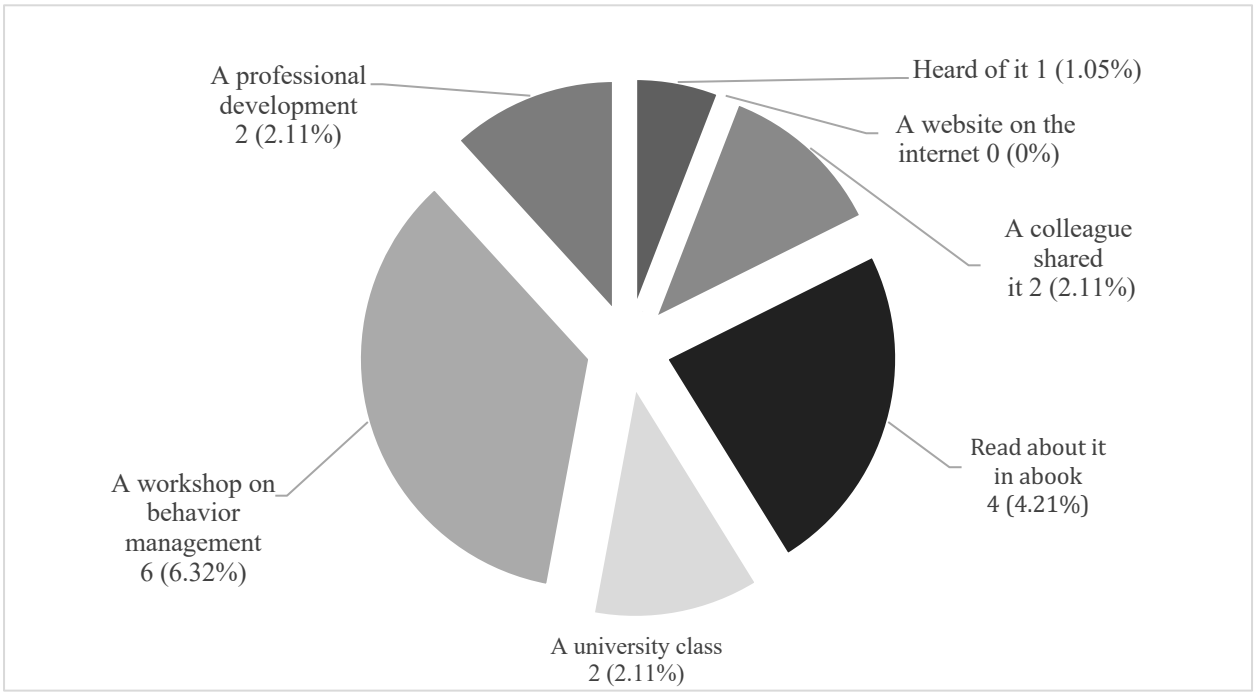

Figure 4. Frequency and percentage on where teachers learn how to employ use of positive before negative strategies.

Where Teachers Learn How to Use Surface Management Strategies

The researcher used frequency and percentage calculations to determine where the teacher respondents learned how to use the identified MTSS Tier 1 Surface Management Behavioral Strategies. These frequencies and percentages are presented on Table 14. The strategy, Redirection, had a total of five (5.26%) respondents who indicated that they had only heard of it, and did not know how to use it. However, four (4.21%) respondents learned how to use this strategy from a website; five (5.26%) learned how to use it from a colleague; five (5.26%) from a book; three (3.16%) during a university course; 12 (12.63%) during a workshop in behavior management; and three (3.16%) respondents indicated that they learned how to use

this strategy through professional development. For the Redirection strategy, the majority of the teacher respondents indicated that they learned this strategy from a workshop on behavior management that they sought out on their own time.

Next, respondents who indicated they knew about the strategy Planned Ignoring, were asked to indicate the source of their knowledge. A total of six (6.32%) respondents responded they had only heard of it and did not know how to use it. A total of nine (9.47%) respondents indicated that they learned how to use this strategy from a website, 12 (12.63%) from a colleague, and, three (3.16%) from a book they had read. Another six (6.32%) respondents indicated that they had learned how to use the strategy from a university course, 25 (26.32%) responded that they had learned how to use it in a workshop setting; and seven (7.37%) indicated they learned how to use this strategy during professional development. For the strategy of Planned Ignoring, the majority of the teacher respondents learned this strategy from a colleague who shared it with them and during professional development.

The respondents were asked to indicate where they had learned about the use of the strategy titled Signaling in a Non-verbal Way. Nine (9.47%) respondents had only heard of it and did not know how to use it, these were therefore directed to the next strategy. One (1.05%) learned about using this strategy from a website, two (2.11%) of the respondents indicated that they learned how to use this strategy from a colleague, three (3.16%) from a book they read, three (3.16%) in a university course, while four (4.21%) indicated they learned how to use this strategy in a workshop, and no one indicated their knowledge was derived from professional development. For the strategy of Signaling in a Non-verbal Way, the largest number of respondents who said they knew of it indicated that they had only heard of it and did not know how to use it.

Table 14

Frequency and Percentage on Where Teachers Learn How to Use Surface Management Strategies

	Only Heard of It		Website on the Internet		Colleague * Shared It		Read About It in a Book		University Class		Workshop * on Behavior Management		Professional Develoment	
	#	%	n	%	n	%	n	%	n	%	n	%	n	%
Redirection	5	5.26	4	4.21	5	5.26	5	5.26	3	3.16	12	12.63	3	3.16
Planned Ignoring	6	6.32	9	9.47	12	12.63	3	3.16	6	6.32	25	26.32	7	7.37
Signaling - Non-verbal	9	9.47	1	1.05	2	2.11	3	3.16	3	3.16	4	4.21	0	0.00
Proximity Control - Decreasing the Distance	5	5.26	0	0.00	2	2.11	4	4.21	2	2.11	5	5.26	2	2.11
Proximity Control - Increasing the Distance	5	5.26	0	0.00	2	2.11	2	2.11	2	2.11	3	3.16	1	1.05
Interest Bosting	7	7.37	1	1.05	4	4.21	0	0.00	2	2.11	7	7.37	2	2.11
Removal of Object	11	11.58	5	5.26	5	5.26	5	5.26	4	4.21	8	8.42	2	2.11
Antiseptic Bouncing	3	3.16	0	0.00	6	6.32	2	2.11	3	3.16	2	2.11	2	2.11
Total	51	53.68	20	21.05	38	40.00	24	25.26	25	26.32	66	69.47	19	20.00

Note. Percentages were determined based on the total number of respondeents ($N = 95$).

* The majority of teachres selected these sources as where they learned how to use *Surface Management* strategies.

The next strategy examined was Proximity Control - Decreasing the Distance between the teacher and the student**.** To start, five (5.26%) respondents stated that they only had limited knowledge of the strategy, having only heard of it. No one indicated they had learned this strategy from a website. Two (2.11%) indicated they had learned how to use this strategy from a colleague, four (4.21%) rom a book that they had read, two (2.11%) from a university course, five (5.26%) during a workshop on behavior management, and two (2.11%) respondents said that they had learned how to use this strategy during professional development. For the strategy of Proximity Control - Decreasing the Distance, most of the teacher respondents who knew how to use the strategy indicated that they had gained this knowledge from a workshop on behavior management.

The strategy Proximity Control - Increasing the Distance between teacher and student, followed the question on the decreasing the distance strategy. In this area, a total of five (5.26%) respondents stated they had only heard of the strategy and did not know how to use it. None of the participants indicated that they learned this strategy from the Internet. Two (2.11%) respondents indicated their knowledge came from a colleague who had shared it with them, two (2.11%) indicated they learned about how to use this strategy from a book that they had read, two (2.11%) in a university course, three (3.16%) during a workshop on behavior management, and one (1.05%) respondent learned how to use this strategy from professional development. As shown, for this strategy of Proximity Control - Increasing the Distance, the majority of the teacher respondents had only heard of the strategy and did not know how to use it.

The strategy of Interest Boosting was the next examined to determine the source of respondents' knowledge for its use. For this question, seven (7.37%) of the respondents had only heard of the practice and did not know how to use it. Among the participants who said they had

knowledge of how to implement the strategy, one (1.05%) indicated their resource for their knowledge of this strategy was the Internet, four (4.21%) learned how to use this strategy from a colleague, no one indicated they had read about it in a book, two (2.11%) asserted they had learned about how to use this strategy during a university course, seven (7.37%) indicated they had learned about it during a workshop in behavior management, and the last source of how to use the strategy, professional development, was selected by two (2.11%) of the respondents. For the strategy of Interest Boosting, the majority of the teacher respondents learned about it from a colleague who shared it with them or from a workshop on behavior management; however, just as many respondents had only heard of it but didn't know how to use it as had learned about it from a workshop (n = 7; 7.37%).

The respondents next defined their source for information on the strategy of Removal of the Object, for use when students were distracted from instruction by something**.** To start, five (5.26%) respondents had only heard about the strategy and did not know how to use it. A total of five (5.26%) of the respondents indicated that they learned how to use this strategy from a website. Next, another five (5.26%) indicated their source was a colleague who had shared it, five (5.26%) indicated they had read about how to use it in a book, four (4.21%) learned of it during a course at a university, eight (8.42%) from a workshop on behavior management, and two (2.11%) of the respondents learned this strategy during professional development. For the strategy of Removal of the Object, the majority of the teacher respondents that used this strategy, learned about how to use it from a website or read about how to use it in a book.

Lastly, Antiseptic Bouncing was examined to identify where the teachers had learned how to use it. Three (3.16%) of the respondents indicated they had only heard of the strategy and did not know how to use it. None of the respondents indicated that they learned about this

strategy on a website, while a total of six (6.32%) indicated they had obtained their information about this strategy from a colleague. Two (2.11%) respondents learned this strategy from a book that they had read, three (3.16%) learned about it from a university class, two (2.11%) from a workshop on behavior management, and two (2.11%) indicated they learned how to use this strategy from professional development. For the strategy of Antiseptic Bouncing, the majority of the teacher respondents learned this strategy from a colleague who shared it with them.

For the Surface Management strategies, the responses indicated that the teachers identified no specific resource for where they learned how to use each strategy. This section included descriptive statistics (i.e., calculations of frequency of participant responses, calculations of percentages of participants who responded) about the Surface Management strategies. The survey results were reported for each strategy. The reported frequencies and percentages provided evidence of differences in the responses of where the teacher respondents learned how to use the specific Tier 1 MTSS strategies. Table 14 presents the descriptive statistics for where the teachers learned how to use Redirection, Planned Ignoring, Signaling, Proximity Control - Increasing the Distance, Proximity Control - Decreasing the Distance, Interest Boosting, Removal of the Object, and Antiseptic Bouncing.

Where Teachers Learn How to Use Positive Consequences Strategies

Figure 5 presents the data regarding where the respondents indicated they had learned how to use the strategies for increasing behavior through positive consequences. First, two (2.1%) respondents indicated that they had only heard about Providing Reinforcement for Doing Expected Behavior, and did not know how to use it. The respondents who indicated they had more in-depth knowledge of the strategy were as follows: (a) six (6.32%) respondents indicated that they had learned how to use it from the Internet; (b) 19 (20%) respondents stated that a

colleague shared it; (c) four (4.21%) respondents had learned the strategy from a book that they had read; (d) another 10 (10.53%) had learned about how to use it through a university course, (e) a relatively large number of 17 (17.89%) learned how to use this strategy from a workshop in behavior management; and (f) four (4.21%) respondents learned how to use this strategy from professional development.

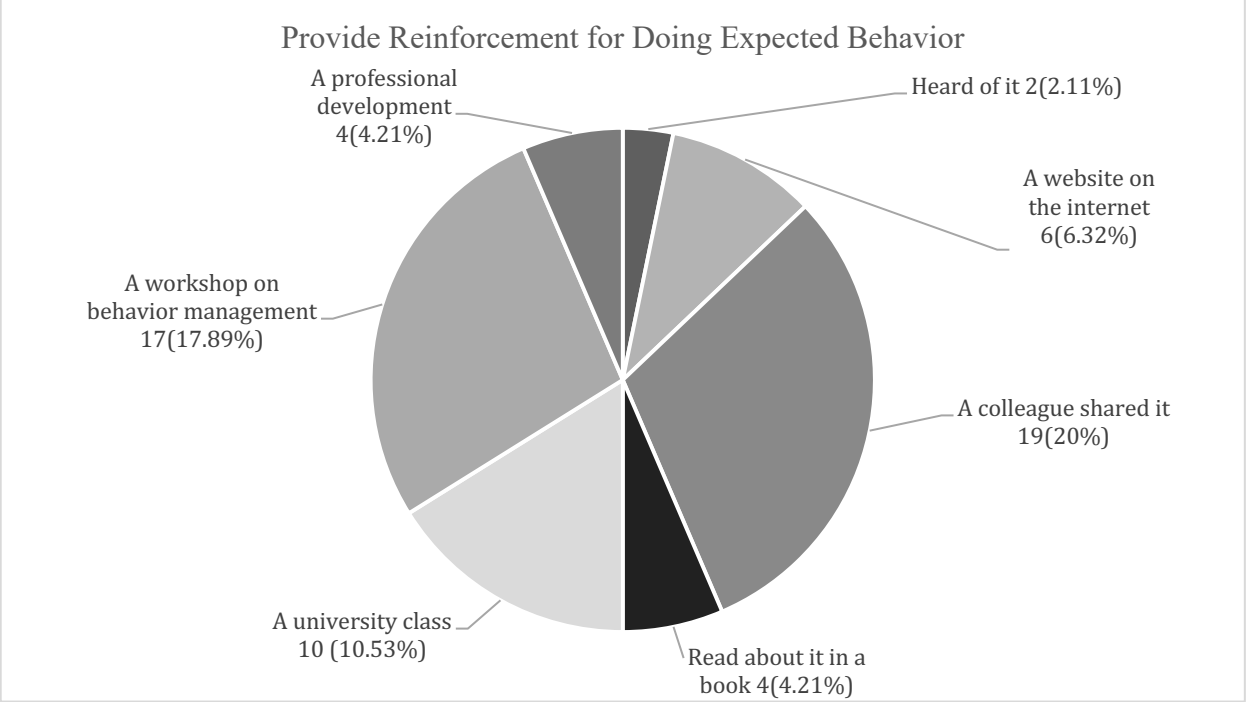

Figure 5. Frequency and percentage on where teachers learn how to use provide reinforcement for doing expected behavior.

The next strategy was Provide Rewards for Doing Expected Behavior (see Figue 6). A total of six (6.32%) respondents indicated that they had only heard about the strategy. Among those who actually knew how to use the strategy, three (3.16%) indicated they had learned about it from a website, 19 (20%) learned about it from a colleague, two (2.11%) cited a book that they read as their source, and 12 (12.63%) respondents had learned about it from a university course. Furthermore, 18 (18.95%) respondents learned about how to use this strategy from a workshop in

behavior management; and four (4.21%) of the respondents stated they had learned how to use this strategy from a professional development.

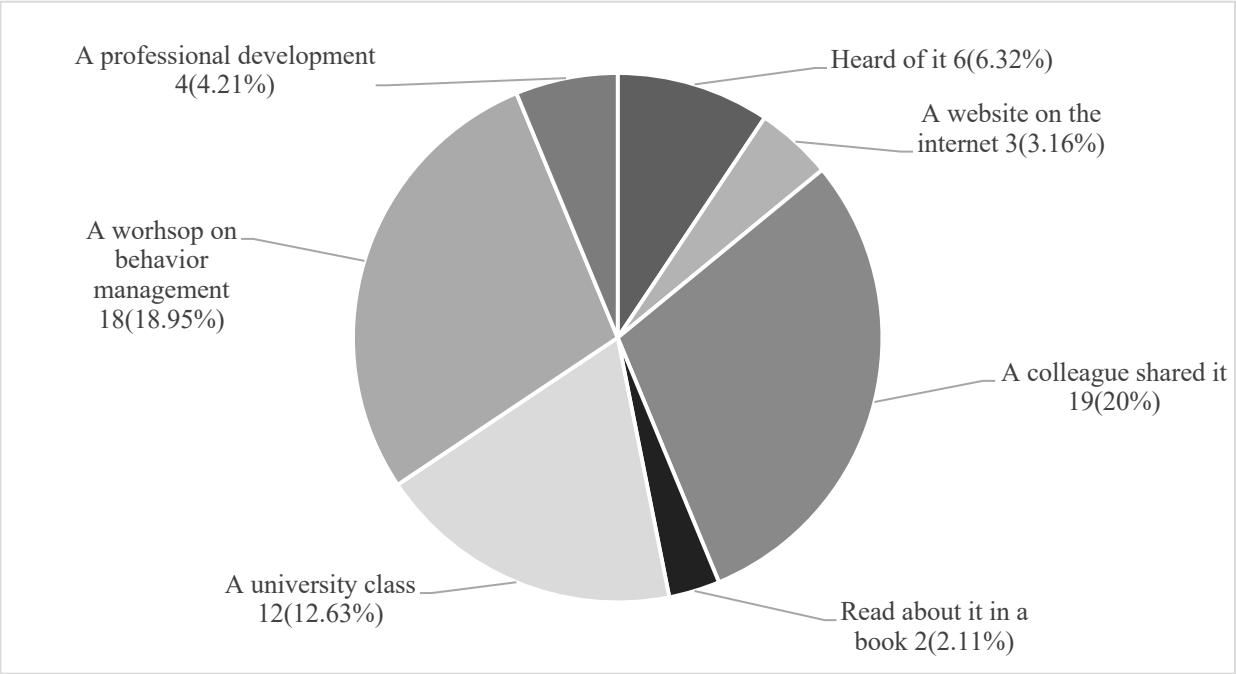

Figure 6. Frequency and percentage on where teachers learna how to use provide rewards for doing expected behavior.

The strategy, Provide Tangibles for Doing the Expected Behavior, was the next to be examined in terms of how the respondents learned how to use it. First, eight (8.42%) of the respondents indicated that they had only heard about the strategy and did not know how to use it. A total of four (4.21%) respondents had learned of this strategy from a website on the Internet. Thirteen (13.68%) indicated that their resource for this strategy was a colleague who had shared information on it; a total of 5 (5.26%) respondents learned about this strategy from a book that they had read. Another 11 (11.58%) respondents indicated that they learned how to use this strategy during a university course. A total of 14 (14.74%) respondents had learned about it from

a workshop in behavior management. Last of all, three (3.16%) respondents indicated that they learned how to use this strategy from professional development (see Figue 7).

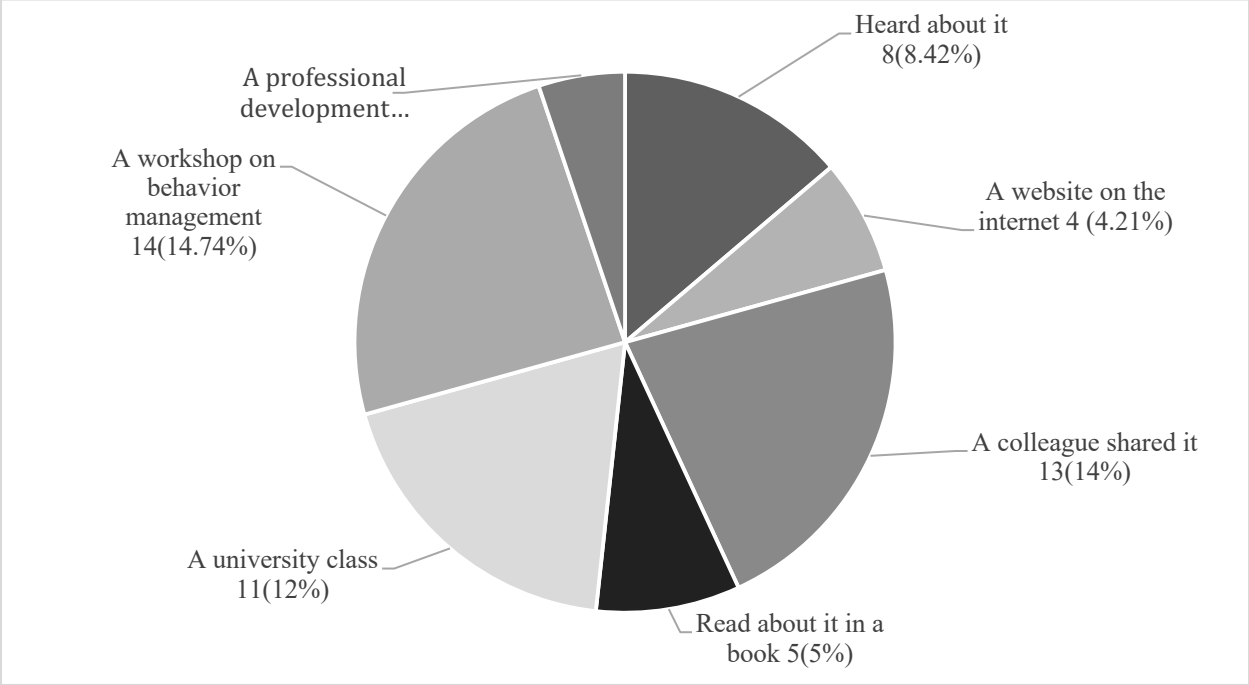

Figure 7. Frequency and percentage of where teachers learn how to use provide tangibles for doing the expected behavior.

Where Teachers Learn to Use Negative Consequences Strategies

The frequencies of sources for where teachers learned how to use negative consequences to correct behavior is reflected on Figures 8, 9, 10, and 11. The Use of Negative Consequences for Challenging Behavior was indicated by three (3.2%) respondents as a strategy that they had only heard about and did not know how to use. Three (3.2%) other respondents stated they had learned about using negative consequences from a website, three (3.2%) indicated they had learned about its use from a colleague, and one (1.1%) respondent learned about using negative consequences from a book. No one identified that they had learned about using negative

consequences during a course at a university, and only one (1.1%) respondent stated that they learned about using negative consequences as a strategy from a workshop in behavior management. Finally, none of the respondents indicated they learned about using negative consequences from professional development (see Figue 8).

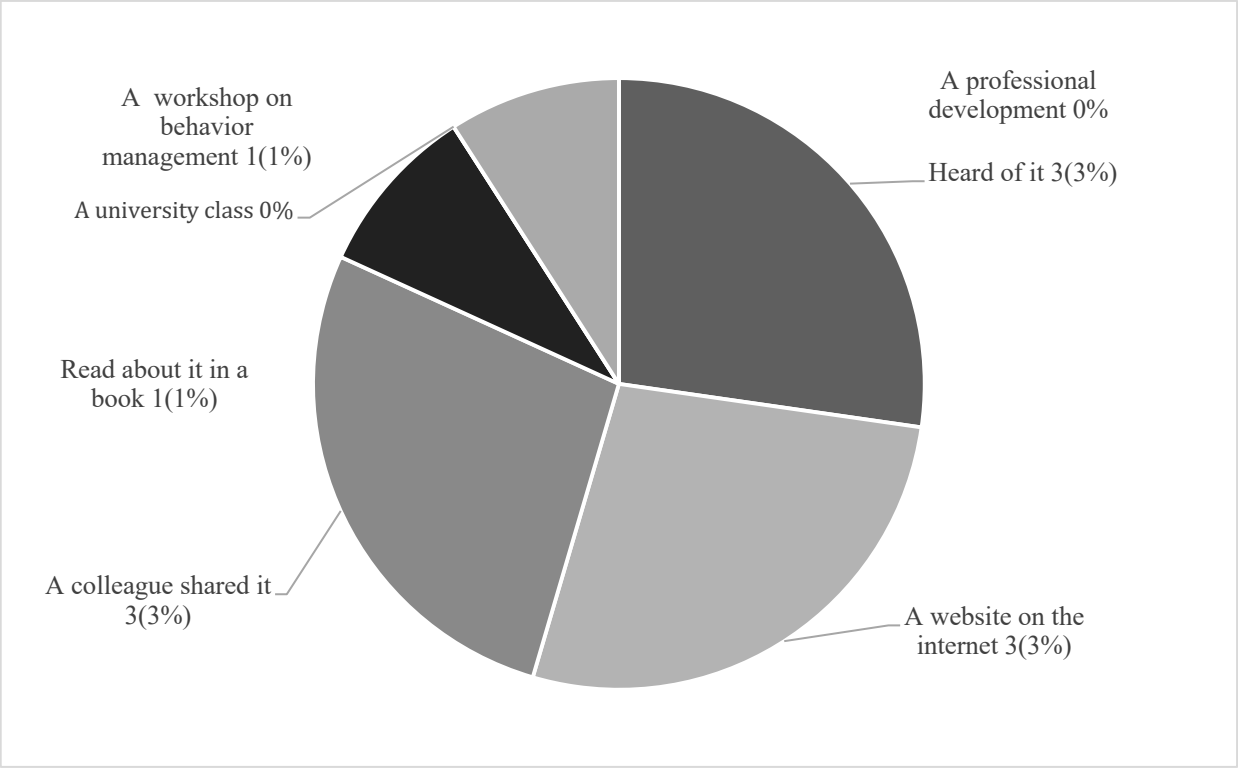

Figure 8. Frequency and percentage on where teachers learn how to use negative consequences for challenging behavior.

The use of Rule Reminder was the next strategy examined, and the analysis of where respondents said they learned about using it is presented on Figure 9. Only four (4.2%) respondents stated they had only heard of the strategy and did not know how to use it. Two (2.1%) respondents stated that they had learned how to use this strategy from a website, eight (8.4%) indicated that their source was a colleague, three (3.2%) respondents learned about using this strategy from a book that they had read, and three (3.2%) stated that they had learned about the strategy during a university course. Eight respondents (8.4%), indicated that they had learned

how to use this strategy from a workshop on behavior management, and three (3.2%) respondents stated that they had learned about using this strategy during professional development (see Figue 9).

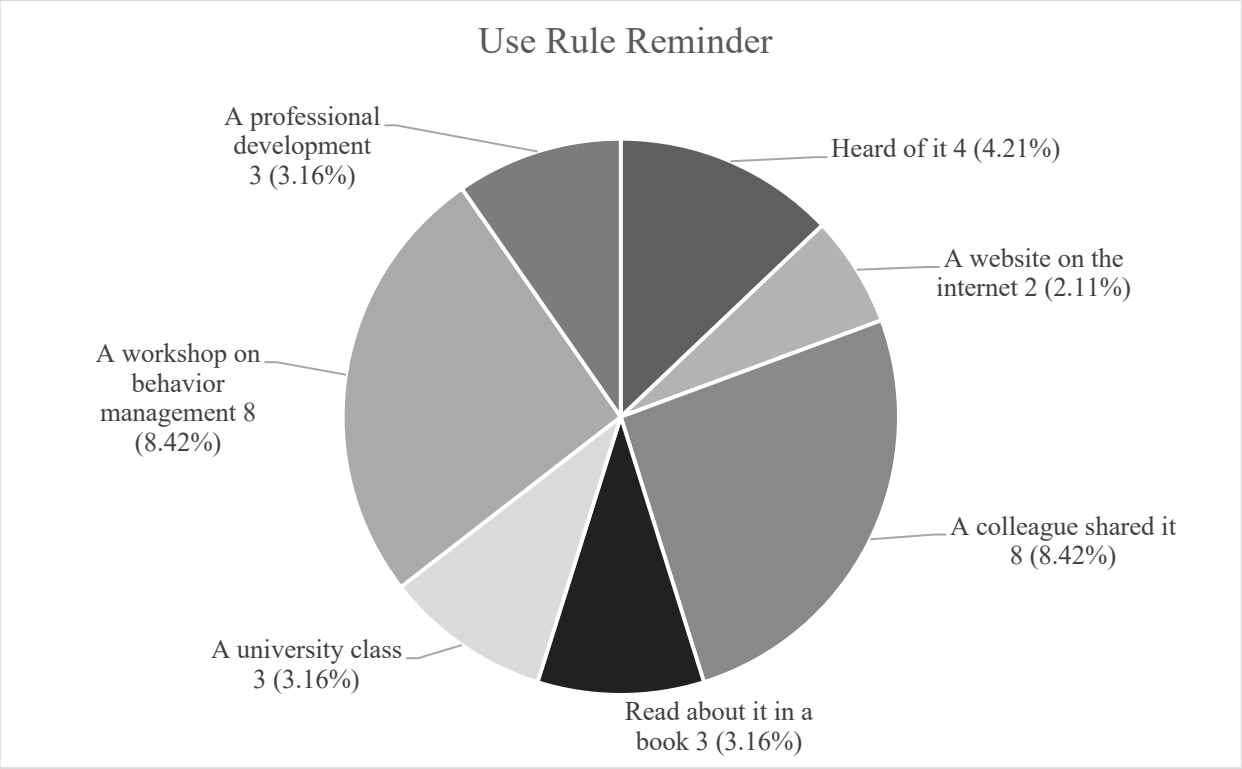

Figure 9. Frequency and percentage on where teachers learn how to use rule remidner strategy.

The strategy, Taught the Consequence of Breaking a Classroom Rule*,* was examined next. Twelve (12.63%) respondents indicated that they had only heard of the strategy and did not know how to use it. For this question, the sources of knowledge were: (a) three (3.16%) respondents learned about this strategy from a website, (b) eight (8.42%) learned about it from a colleague, (c) three (3.16%) learned about it from a book that they had read, (d) four (4.21%) from a university course, (e) eight (8.42%) obtained their knowledge of the strategy from a

workshop in behavior management, and (f) four (4.21%) respondents learned about this strategy during a professional development program. These data are presented on Figure 10.

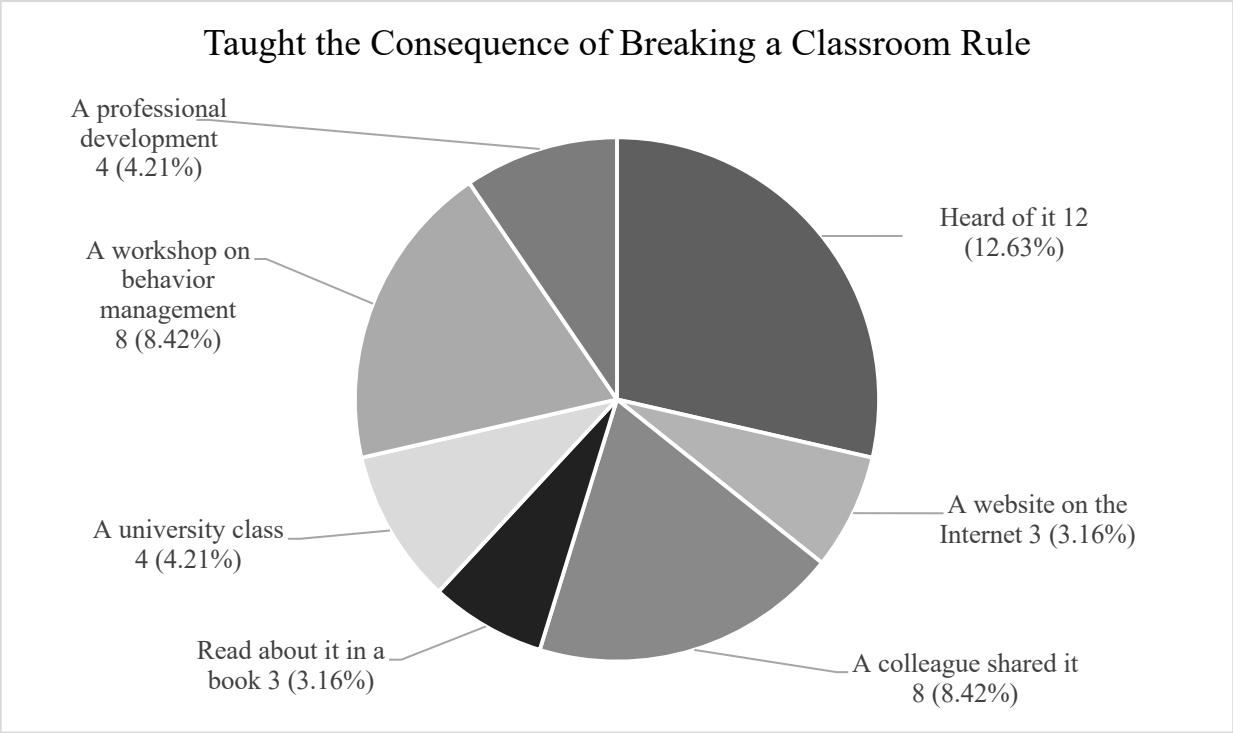

Figure 10. Frquency and percentage on where teachers learn how to use taught the consequences of breaking a classroom rule.

Respondents indicated that the source of knowledge from which they learned about using Explicit Reprimand strategy were both informal and formal. Seven (7.37%) of the respondents indicated that they had only heard of it and did not have in-depth knowledge of it. Nine (9.47%) of the respondents indicated that they learned about this strategy on the Internet, 11 (11.59%) indicated they learned this strategy from a colleague, and five (5.26%) stated they had read about how to use the strategy in a book. The remaining respondents who indicated they knew about this strategy learned about it in a university course (n = 8; 8.42%), a workshop on behavior management (n = 19; 20.0%), and professional development they attended (n = 6; 6.32%; see Figure 11).

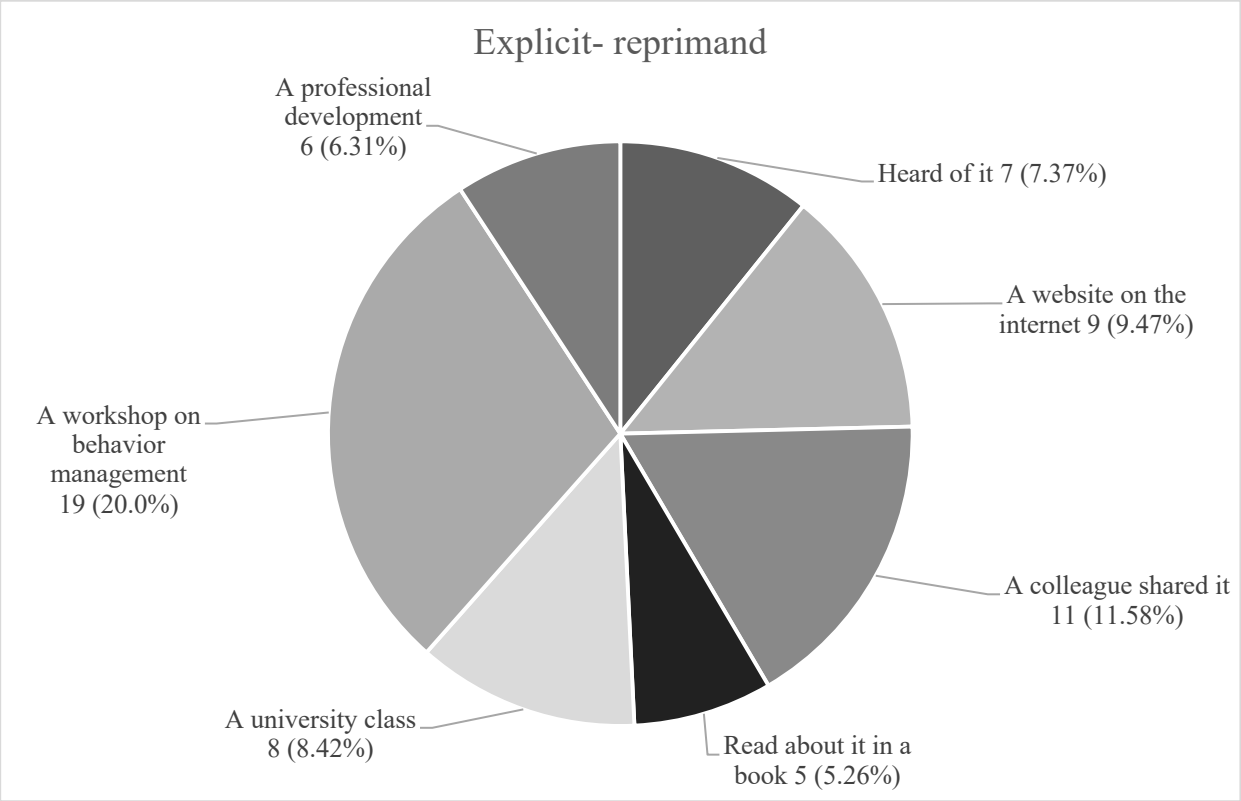

Figure 11. Frequency and percentage of where teachers learn how to use explicit reprimand strategy.

Teachers' Specific Use of Multi-Tiered System of Supports Tier 1 Strategies

Q5 How does the relationship between regular use of specific Tier 1 behavioral strategies when students with challenging behaviors are included in general education elementary teachers' classrooms in Saudi Arabia differ among their years of teaching experience?

H1 There is a difference in the use of specific Tier 1 MTSS behavioral strategies by the elementary general education teachers and their years of teaching experience.

For Research Question 5, the 24 strategies presented were those identified in the literature review as the most commonly used in the Multi-Tiered System of Supports (MTSS) model. Each of the respondents was asked, regarding each strategy, to indicate whether they used it when a student with challenging behaviors was included in the classroom. Hypothesis testing was used

to examine relationships between the teacher respondents' perceptions of the particular strategy and their years of teaching experience. The chi-square test of independence was used to test whether there is a relationship between the strategy respondents said they used with students who displayed challenging behaviors in their classrooms and the demographic variable of teachers' total number of years in teaching. This chi-square analysis was used to determine whether there is a significant relationship between years of teaching experience and use of the individual Tier 1 strategies. The observed frequencies were compared to those expected by chance. The level of significance was set at .05. The strategies teacher respondents indicated they specifically used are presented in four categories, and were: Foundational Behavior Management Strategies, Surface Management Strategies, Negative Consequences to Correct Behavior, and Positive Consequences to Increase Behaviors.

Teachers' Use of Foundational Behavior Management Strategies

Use of Effective Classroom Rules

The results of the chi-square test of independence for H1 indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = .166$, $df = 15$, $p > .05$. Please reference Table 15 for the observed and expected frequencies for H1. A total of 18 out 18 teacher respondents provided responses to this question. In the group of respondents who had five or less years of teaching experience, the observed number of respondents was two out of five expected who knew the strategy indicated that they used this strategy. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was seven out of seven expected who knew the strategy indicated that they used this strategy. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was nine out of nine expected who knew the strategy indicated that they used this strategy.

Analysis of the data indicated that years of teaching experience were not related to the increased use of effective guidelines for writing and implementing classroom rules when students with challenging behaviors were included in their classrooms. The H1 was rejected.

Table 15

Results of Chi-Square Test for Use of Effective Classroom Rules and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	2
	Expected	2
6 to 10 Years		
	Observed	7
	Expected	7
11 or More Years		
	Observed	9
	Expected	9

Note. $\chi^2 = .166$, $df = 15$, $p > .05$. The total number of respondents was $N = 95$.

Use of Classroom Procedures and Routines

Using classroom procedures and routines strategy was the second question under the category of Foundational Behavior Management. Teacher respondents were asked to indicate if they used this strategy when students with challenging behaviors were included in their classroom. The results of the chi-square test of independence for H1 indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = .528$, $df = 3$, $p > .05$. See Table 16 for the observed and expected frequencies for H1. A total of 19 out of 19

teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was three out of three expected who knew the strategy indicated that they used this strategy. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was three out of three expected who knew the strategy indicated that they used this strategy. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was 13 out of 13 expected respondents who knew the strategy indicated that they used this strategy. Analysis of the data indicated the teachers' years of teaching experience did not indicate statistically significant difference use of classroom procedures and routines as a strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 16

Results of Chi-Square for use of Classroom Procedures and Routines and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	3
	Expected	3
6 to 10 Years		
	Observed	3
	Expected	3
11 or More Years		
	Observed	13
	Expected	13

Note. $\chi^2 = .528$, $df = 3$, $p > .05$. The total number of respondents was $N = 95$.

Use of Positive Before Negative Strategies

Using positive before using negative strategies to correct challenging student behaviors was the next strategy known and used by teachers analyzed. The results of the chi-square test of independence for H1 indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = .690$, $df = 9$, $p > .05$. See Table 17 for the observed and expected frequencies for H1. A total of 12 out of 13 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was three out of four expected who knew the strategy indicated that they used this strategy. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was two out of two expected who knew the strategy indicated that they used this strategy. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was seven out of seven expected respondents who knew the strategy indicated that they used this strategy. Analysis of the data using chi-square revealed years of teaching experience did not indicate a statically significant difference in their use of positive before negative strategies when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 17

Results of Chi-Square Test for Use of Positive Before Negative Strategies and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	3
	Expected	4
6 to 10 Years		
	Observed	2
	Expected	2
11 or More Years		
	Observed	7
	Expected	7

Note. $\chi^2 = .690$, $df = 9$, $p > .05$. The total number of respondents was $N = 95$.

Teachers' Use of Surface Management Strategies

Surface Management strategies provide teachers with simple, non-intrusive ways to respond to minor disruptive behavior without interrupting classroom instruction. Teachers who use surface management strategies are using the strategy to act in a proactive manner intending to minimize student disruptive behavior. Surface management strategies provide teachers with preventative ways to stop minor disruptive behavior and are simple and non-intrusive to classroom instruction while promoting, maintaining, and restoring students to use appropriate behavior. The categories of surface management strategies identified on the survey were redirection, planned ignoring, signaling, proximity control of increasing the distance, decreasing

the distance, interest boosting, removing the object, and antiseptic bouncing (Levin & Nolan, 2010).

Use of Redirection

Redirection was the first strategy reported in the results of the chi-square analyses. The results of the chi-square test of independence for H1 indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = .258$, $df = 9$, $p > .05$. See Table 18 for the observed and expected frequencies for H1. A total of 19 out of 24 respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was four out of four expected who knew the strategy indicated they used it. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was one out of three expected respondents who knew the strategy indicated that they used this strategy. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was 14 out of 17 respondents who knew the strategy indicated that they used this strategy. Analysis of the data indicated that teachers' years of teaching experience did not indicate a statistically significant difference in their use of the Redirection strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 18

Chi-Square for Classroom Use of Redirection and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	4
	Expected	4
6 to 10 Years		
	Observed	1
	Expected	3
11 or More Years		
	Observed	14
	Expected	17

Note. $\chi^2 = .258$, $df = 9$, $p > .05$. The total number of respondents was $N = 95$.

Use of Planned Ignoring

Planned Ignoring was the second strategy addressed under the surface management strategies category. The results of the chi-square test of independence for H1 indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = .567$, $df = 6$, $p > .05$. See Table 19 for the observed and expected frequencies for H1. A total of 47 out of 95 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was seven out of eight expected respondents who knew the strategy indicated they used it. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was eight out of nine expected respondents who knew the strategy indicated that

they used this strategy. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was a total of 32 out of 32 expected respondents who knew the strategy indicated that they used this strategy. Analysis of the data indicated years of teaching experience did not indicate a statistically significant difference in teacher use of the Planned Ignoring strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 19

Chi-Square for Use of Planned Ignoring and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	7
	Expected	8
6 to 10 Years		
	Observed	8
	Expected	9
11 or More Years		
	Observed	32
	Expected	32

Note. $\chi^2 = .567$, $df = 6$, $p > .05$. The total number of respondents was $N = 95$.

Use of Signaling

Teachers are often motivated to use the signaling strategies to foster communication with students while limiting interruptions during instruction (Simonsen et al., 2010). The use of the signaling strategy was analyzed using the chi-square test of independence. The results of the chi-square test of independence for H1 indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = .311$, $df = 6$, $p > .05$. See Table 20 for the observed and expected frequencies for H1. A total of 19 out of 22 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was four out of four expected respondents who knew the strategy indicated they used it. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was five out of seven expected respondents who knew the strategy indicated that they used this strategy. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was 10 out of 11 expected respondents who knew the strategy indicated that they used this strategy. Analysis of the data indicated years of teaching experience did not indicate a statistically significant difference in teacher use of the Signaling strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 20

Chi-Square for Use of Signaling and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	4
	Expected	4
6 to 10 Years		
	Observed	5
	Expected	7
11 or More Years		
	Observed	10
	Expected	11

Note. $\chi^2 = .311$, $df = 6$, $p > .05$. The total number of respondents was $N = 95$.

Use of Proximity Control - Increasing the Distance

The knowledge and use of proximity control by increasing the distance between the teacher and the student displaying challenging behaviors was the fourth strategy identified within the surface management category. The results of the chi-square test of independence for H1 indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = .837$, $df = 6$, $p > .05$. See Table 21 for the observed and expected frequencies for H1. A total of 14 out of 14 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was two out of two expected respondents who knew the strategy indicated they used it. Of those respondents had 6-10 years of teaching experience, the

observed number of respondents was four out of four expected respondents who knew the strategy indicated they used it. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was eight out of eight expected respondents who knew the strategy indicated they used it. Analysis of the data indicated that teachers' years of teaching experience did not statistically significantly differ in their use of the Proximity Control - Increasing the Distance strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 21

Chi-Square for Use of Proximity Control - Increasing the Distance and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	2
	Expected	2
6 to 10 Years		
	Observed	4
	Expected	4
11 or More Years		
	Observed	8
	Expected	8

Note. $\chi^2 = .837$, $df = 6$, $p > .05$. The total number of respondents was $N = 95$.

Use of Proximity Control - Decreasing the Distance

The fifth strategy in the surface management strategies examined was the use of Proximity Control - Decreasing the Distance between the teacher and the student. The results of

the chi-square test of independence for H1 indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = .726$, $df = 9$, $p > .05$. See Table 22 for the observed and expected frequencies for H1. Out of the 95 total respondents, 14 teacher respondents indicated that they used proximity. A total of 15 out of 19 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was three out of three expected respondents who knew the strategy indicated they used it. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was five out of seven expected respondents who knew the strategy indicated they used it. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was seven out of nine expected respondents who knew the strategy indicated they used it. Analysis of the data indicated teachers' years of teaching experience did not show a statistically significant difference in their use of the Proximity Control - Decreasing the Distance strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 22

Chi-Square for Use of Proximity Control - Decreasing the Distance and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	3
	Expected	3
6 to 10 Years		
	Observed	5
	Expected	7
11 or More Years		
	Observed	7
	Expected	9

Note. $\chi^2 = .726$, $df = 9$, $p > .05$. The total number of respondents was $N = 95$.

Use of Interest Boosting

The Interest Boosting was the sixth addressed strategy. The results of the chi-square test of independence for H1 indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = .340$, $df = 3$, $p > .05$. See Table 23 for the observed and expected frequencies for H1. A total of 17 out of 22 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was no one responded out of three expected respondents who knew the strategy indicated that they used this strategy. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was five out of six expected respondents who knew the strategy indicated they used it. Of those respondents

with 11 or more years of teaching experience, the observed number of respondents was 12 out of 13 expected respondents who knew the strategy indicated they used it. Analysis of the data showed no relationship difference between teachers' years of teaching experience in their use of the Interest Boosting strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 23

Chi-Square for Interest Boost and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	3
	Expected	3
6 to 10 Years		
	Observed	5
	Expected	6
11 or More Years		
	Observed	12
	Expected	13

Note. $\chi^2 = .340$, $df = 3$, $p > .05$. The total number of respondents was $N = 95$.

Use of Removal of the Object

The removal of the object was the sixth addressed strategy. The results of the chi-square test of independence for H1 indicated that there was not a statistically significant difference between the observed and expected values, $\chi^2 = .327$, $df = 9$, $p > .05$. See Table 24 for the observed and expected frequencies for H1. A total of 29 out of 40 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of

teaching experience, the observed number of respondents was seven out of eight expected respondents who knew the strategy indicated they used it. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was five out of 12 expected respondents who knew the strategy indicated they used it. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was 17 out of 20 expected respondents who knew the strategy indicated they used it. Analysis of the data indicated years of teaching experience did not show a statistically significant difference in their use of the Removal of the Object strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 24

Chi-Square for Use of Removal of the Object and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	7
	Expected	8
6 to 10 Years		
	Observed	5
	Expected	12
11 or More Years		
	Observed	17
	Expected	20

Note. $\chi^2 = .327$, $df = 9$, $p > .05$. The total number of respondents was $N = 95$.

Use of Antiseptic Bouncing

The Antiseptic Bouncing was the sixth addressed strategy. The results of the chi-square test of independence for H1 indicated that there was no statistically significant difference between the observed and expected values, $\chi^2 = .098$, $df = 6$, $p > .05$. See Table 25 for the observed and expected frequencies for H1. A total of 13 out of 16 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was one out of two expected respondents who knew the strategy indicated that they used this strategy. Of those respondents had 6-10 years of teaching experience, the observed number of respondents was six out of six expected respondents who knew the strategy indicated they used it. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was 6 out of 8 expected respondents who knew the strategy indicated they used it. Analysis of the data indicated years of teaching experience did not show a statistically significant difference in teachers' use of the Antiseptic Bouncing strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 25

Chi-Square for Use of Antiseptic Bouncing and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	1
	Expected	2
6 to 10 Years		
	Observed	6
	Expected	6
11 or More Years		
	Observed	6
	Expected	8

Note. $\chi^2 = .098$, $df = 6$, $p > .05$. The total number of respondents was $N = 95$.

Teachers' Use of Negative Consequences to Correct Behavior

Negative consequences, when used as strategies to correct behavior, provide teachers with simple, non-intrusive ways to prevent students' inappropriate behavior without interrupting classroom instruction. Teachers who used the negative consequences of rule reminder, consequences for breaking a classroom rule, use of a negative consequence to decrease a challenging behavior, and the verbal strategy of an explicit reprimand frequently used them to prevent a student's inappropriate behavior so that they might continue the assigned activity.

Use of Rule Reminder

The results of the chi-square test of independence for H1 indicated that there was no a statistically significant difference between the observed and expected values, $\chi^2 = .705$, $df = 6$,

$p > .05$. See Table 26 for the observed and expected frequencies for H1. A total of 21 out of 25 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was three out of three expected respondents who knew the strategy indicated they used it. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was six out of seven expected respondents who knew the strategy indicated they used it. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was 12 out of 15 expected respondents who knew the strategy indicated they used it. Analysis of the data indicated teachers' years of teaching experience did not have a statically significant difference in their use of the Rule Reminder strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 21

Chi-Square for Use of Rule Reminder and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	3
	Expected	3
6 to 10 Years		
	Observed	6
	Expected	7
11 or More Years		
	Observed	12
	Expected	15

Note. $\chi^2 = .705$, $df = 6$, $p > .05$. The total number of respondents was $N = 95$.

Use of Teaching Negative Consequences for Rule-Breaking

Teaching the negative consequences for classroom rule-breaking was the second strategy addressed in the category. The results of the chi-square test of independence for H1 indicated that there was no a statistically significant difference between the observed and expected values, because the $\chi^2 = .541$, $df = 6$, $p > .05$. See Table 27 for the observed and expected frequencies for H1. A total of 24 out of 36 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was three out of four expected respondents who knew the strategy indicated that they used this strategy. Of those respondents had 6-10 years of teaching experience, the observed number of respondents was six out of 10 expected respondents who knew the strategy indicated that they used this strategy. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was 15 out of 22 expected respondents who knew the strategy indicated that they used this strategy. Analysis of the data indicated years of teaching experience did not determine a statistically significant difference in their use of the Teaching Negative Consequence strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 27

Chi-Square for Use Teaching Negative Consequences for Rule Breaking and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	3
	Expected	4
6 to 10 Years		
	Observed	6
	Expected	10
11 or More Years		
	Observed	15
	Expected	22

Note. $\chi^2 = .541$, $df = 6$, $p > .05$. The total number of respondents was $N = 95$.

Use of Negative Consequences to Correct Behavior

The use of negative consequences for correcting and decreasing challenging behavior was addressed next under this category. The results of the chi-square test of independence for H1 indicated that there was a statistically significant difference between the observed and expected values, because the $\chi^2 = .525$, $df = 3$, $p > .05$. See Table 28 for the observed and expected frequencies for H1. A total of 10 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was three out of three expected respondents who knew the strategy indicated they used it. Of those respondents had 6-10 years of teaching experience, the observed

number of respondents was no one of the respondents who knew the strategy indicated they used it. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was seven out of seven expected respondents who knew the strategy indicated they used it. Analysis of the data indicated teaching experience could not show a statistically significant difference in their use of the Negative Consequence to Correct Behavior strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 28

Chi-Square for Use of Negataive Consequences to Correct Behavior and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	3
	Expected	3
6 to 10 Years		
	Observed	0
	Expected	0
11 or More Years		
	Observed	7
	Expected	7

Note. $\chi^2 = .525$, $df = 3$, $p > .05$. The total number of respondents was $N = 95$.

Use of Explicit Reprimand

The use of explicit reprimand was addressed next under the category of Negative Consequences to Correct Behavior. The chi-square test of independence for H1 indicated no

statistically significant difference between the observed and expected values because the χ^2 = .364, $df = 6$, $p > .05$. See Table 29 for the observed and expected frequencies for H1. A total of 33 out of 50 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was five out of six expected respondents who knew the strategy indicated they used it. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was eight out of nine expected respondents who knew the strategy indicated they used it. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was 30 out of 35 expected respondents who knew the strategy indicated they used it. Analysis of the data indicated years of teaching experience did not show a statistically significant relationship difference in their use of the Explicit Reprimand strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 29

Chi-Square for Use of Explicit Reprimand and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	5
	Expected	6
6 to 10 Years		
	Observed	8
	Expected	9
11 or More Years		
	Observed	30
	Expected	35

Note. $\chi^2 = .364$, $df = 6$, $p > .05$. The total number of respondents was $N = 95$.

Teachers' Use of Positive Consequences to Increase Behaviors

The use of positive consequence strategies provides teachers with evidence-based ways to increase students' appropriate behavior without interrupting classroom instruction. Teachers who used positive consequence strategies used them to increase a student's appropriate behavior to continue engagement in assigned tasks/activities. The category includes the evidence-based strategies of giving reinforcement to students who display expected behaviors, giving rewards for expected behaviors, and using tangibles as reinforcement.

Reinforcement for Expected Behaviors

Giving reinforcement to students displaying expected behaviors was the first question addressed within the category of using Positive Consequences to Increase Behaviors. The results of the chi-square test of independence for H1 indicated that there was no statistically significant difference between the observed and expected values, $\chi^2 = .547$, $df = 6$, $p > .05$. See Table 30 for the observed and expected frequencies for H1. A total of 38 out of 50 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was five out of five expected respondents who knew the strategy indicated they used it. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was 13 out of 14 expected respondents who knew the strategy indicated they used it. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was 30 out of 31 expected respondents who knew the strategy indicated they used it. Analysis of the data indicated teachers' years of teaching experience did not show a statistically significant relationship difference in their use of the Reinforcement for Expected Behaviors strategy when students with challenging behaviors were included in their classrooms. The results of the chi-square of independence rejected H1.

Table 30

Chi-Square for Reinforcement for Expected Behaviors and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	5
	Expected	5
	Observed	13
	Expected	14
11 or More Years		
	Observed	30
	Expected	31

Note. $\chi^2 = .547$, $df = 6$, $p > .05$. The total number of respondents was $N = 95$.

Rewarding Expected Behaviors

Rewarding expected behaviors was addressed under the same category. The results of the chi-square test of independence for H1 indicated that there was no statistically significant difference between the observed and expected values, $\chi^2 = .830$, $df = 6$, $p > .05$. See Table 31 for the observed and expected frequencies for H1. A total of 40 out of 47 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was five out of six expected respondents who knew the strategy indicated that they used this strategy. Of those respondents who had 6-10 years of teaching experience, the observed number of respondents was seven out of eight expected respondents who knew the strategy indicated that they used this strategy. Of

those respondents with 11 or more years of teaching experience, the observed number of respondents was 28 out of 33 expected respondents who knew the strategy indicated that they used this strategy. Analysis of the data indicated years of teaching experience were not statistically significant in their use of the Rewarding Expected Behaviors strategy when students with challenging behaviors were included in their classrooms. Thus, the results of the chi-square of independence rejected H1.

Table 31

Chi-Square for Rewarding Expected Behaviors and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	5
	Expected	6
6 to 10 Years		
	Observed	7
	Expected	8
11 or More Years		
	Observed	28
	Expected	33

Note. $\chi^2 = .830$, $df = 6$, $p > .05$. The total number of respondents was $N = 95$.

Giving Tangibles as Reinforcement

Giving tangibles as reinforcement was the last addressed question under the Positive Consequences to Increase Behaviors category. The results of the chi-square test of independence for H1 indicated that there was a statistically significant difference between the observed and

expected values, $\chi^2 = .038$, $df = 6$, $p < .05$. See Table 32 for the observed and expected frequencies for H1. A total of 34 out of 42 teacher respondents provided responses to this question. In the group of teacher respondents who had five or less years of teaching experience, the observed number of respondents was two out of four expected respondents who knew the strategy indicated that they used this strategy. Of those respondents had 6-10 years of teaching experience, the observed number of respondents was five out of eight expected respondents who knew the strategy indicated that they used this strategy. Of those respondents with 11 or more years of teaching experience, the observed number of respondents was 27 out of 30 expected respondents who knew the strategy indicated that they used this strategy. Analysis of the data indicated responses from teachers with 11 or more years of teaching experience were significant regarding their use of giving tangibles as reinforcement as a strategy when students with challenging behaviors were included in their classrooms. Therefore, the results of the chi-square of independence supported H1.

Table 32

Chi-Square for Giving Tangibles as Reinforcement and Years in Teaching

Years of Teaching Experience		Use the Strategy
5 Years or Les		
	Observed	2
	Expected	4
6 to 10 Years		
	Observed	5
	Expected	8
11 or More Years		
	Observed	27
	Expected	30

Note. $\chi^2 = .038$, $df = 6$, $p > .05$. The total number of respondents was $N = 95$.

Finally, in this section, the respondents were asked if there was additional information about behavioral management strategies in the classroom that they would like to add. A total of 10 participants responded to this question. They indicated that it was necessary for schools to provide assistance to teachers to manage challenging behaviors and that more support was needed by teachers on how to manage distracting and aggressive behaviors in the classroom. There was also that several teachers voiced for more communication with parents about the student's classroom behavior in comparison with what the parents observed in the home. Along with the request for increased communication, teachers also requested more information on what methods are recommended for obtaining information regarding a student's behavior in the home.

One teacher respondent took this opportunity to clarify and reconfirm that they did not support providing positive reinforcement to students.

Summary

Chapter IV included descriptive statistics for Research Questions 1 through 4 and chi-square and hypothesis testing for Research Question 5. The survey results were analyzed, and each research question was addressed. The results of the chi-square test did not provide evidence of statistically significant differences in the responses of teachers who knew about and used specific Tier 1 MTSS strategies who had more years of teaching experience. Presented in Chapter V are the implications of the findings, connections to the literature reviewed for the student, implications and recommendations for further research.

CHAPTER V

DISCUSSION

Introduction

Teachers in Saudi Arabia who want to implement Law 227 in schools, which promotes the inclusion of students with disabilities in their classroom, advocate for more education and training in the area of classroom management (Bawaneh et al., 2020; Coppersmith et al., 2020). They recognize that they are not adequately prepared to handle the range of students who present challenging behaviors in the average general education classroom, let alone students who present more serious challenging behaviors (Coggshall et al., 2012; Farkas et al., 2003).

Tier 1 MTSS behavioral strategies can address effective universal support. When used with fidelity, these strategies should be sufficient to meet the needs of the majority of students who display low-level challenging behaviors (Sugai et al., 2002). By meeting the needs of most, through effective instruction and behavior supports in the Tier 1 MTSS model, fewer students will require more intensified support, and more will meet with academic and social success (Filter & Horner, 2009; Y. Lee et al., 1999; Preciado et al., 2009). The purpose of this study was to investigate the knowledge and the use of Tier 1 strategies found in the MTSS literature by Saudi GE elementary school teachers when students with behavioral challenges were included in their classrooms. The research was also conducted to further determine whether a teacher's years of teaching experience impacted their perception of using specific strategies when students with challenging behaviors were included in their classrooms. The results of this study contribute to the body of research about the use of MTSS Tier 1 strategies in elementary schools in Saudi

Arabia, specifically the impact of knowledge and use of those strategies for including students with disabilities in general education classrooms. This chapter will provide an overview of the problem, the purpose of the study and research questions, a review of the methodology, the major findings, conclusions, and future research recommendations.

Study Summary

The purpose of this study was to investigate the knowledge and the use of Tier 1 strategies found in the MTSS literature by Saudi GE elementary school teachers when students with behavioral challenges were included in their classrooms. The study survey also obtained data specific strategies respondents knew and where they had learned about how to use the strategy. Analysis of the teachers' responses to the survey questions was used to examine the relationship between teachers' years of teaching experience and their use of specific Tier 1 strategies. An overview of the problem, the purpose of the study and research questions, review of the methodology, the major findings, conclusions, and future research recommendations are provided.

Overview of the Problem

Limited research has been published investigating the relationship between teacher years of experience, teacher knowledge of MTSS Tier 1 strategies, and their use when students with challenging behaviors are included in the classroom. Studies such as Alquraini (2010) and Alrwaily (2016) noted that teachers who can manage the behavior of all students, including those with behavioral challenges, are more effective in providing education to all Saudi students in the GE setting. Murry and Alqahtani (2015) reported accessibility to the knowledge of what is required for special education law, such as positive before negative strategies, provided an understanding of what aspects of teacher training were needed.

The inclusion of students with disabilities in the general education classroom has become a reality and regular teaching aspect for GE educators. The practices included in MTSS Tier 1 are applicable for all students. Therefore they present the added benefit of removing the stigma of practices that are specifically directed at only those students identified in a classroom environment--such as that of the typical general education classroom--as requiring accommodations. The responses gathered by this study's survey indicated that most Saudi elementary GE teachers perceive themselves as having students with challenging behaviors included in their classrooms. The findings in this study were that the knowledge and use of MTSS Tier 1 practices varies amongst these teachers. The respondents were found to appear willing to answer the vast majority of the questions directly and truthfully. Through these responses, it was revealed that these teachers, unfortunately, reported a lack of professional development preparation. Other studies, such as Murry and Alqahtani (2015) and Alrwaily (2016), noted teachers need more education and training in classroom management. Similarly, other studies, such as those done by Bawaneh (2020) and Al-Mousa (2010), examined the Saudi Ministry of Education policies and found that the directives for such education and training fail to support the professional development of teachers. It is important to recognize that the use of MTSS Tier 1 strategies is a significant change in approach for teachers in Saudi Arabia, as it diverts from what they have previously been trained to use for behavior management. It is essential that teacher preparation program leaders are aware of how teachers perceive knowledge of specific strategies and also the relationship between teachers' differing years of teaching experience and teachers' perceptions of where they learn how to use these strategies. This will impact teacher preparation programs as they move toward implementing the positive behavior strategies first concept promoted by the MTSS model.

Statement of Purpose and Research Questions

In the current study, the survey was designed to investigate what Saudi elementary teachers knew about and how they used MTSS Tier 1 strategies when they had students with challenging behaviors included in their classrooms. Data were analyzed to identify whether teacher perceived knowledge had an effect on the use of the strategy as affected by years of teaching experience. The following research questions were used to guide this study:

Q1 Do general education elementary teachers in Saudi Arabia perceive that they have students with challenging behaviors in their classrooms?

Q2 Do general education elementary teachers in Saudi Arabia have knowledge about specific Tier 1 behavioral strategies?

Q3 Do general education elementary teachers in Saudi Arabia use specific Tier 1 behavioral strategies in their classroom when students with challenging behaviors are present?

Q4 Where do general education elementary teachers in Saudi Arabia learn how to use the specific Tier 1 behavioral strategies?

Q5 How does the relationship between regular use of specific Tier 1 behavioral strategies when students with challenging behaviors are included in general education elementary teachers' classrooms in Saudi Arabia differ among their years of teaching experience?

Review of Methodology

The first content section of the survey solicited information from the respondents regarding their knowledge of 24 specific MTSS Tier 1 behavioral strategies. These 24 questions were divided into four categories: Knowledge of Foundational Behavioral Management Strategies, Knowledge About Surface Management Strategies, Knowledge of Positive Consequences, and Knowledge of Negative Consequences. Each of the four categories included identified evidence-based MTSS Tier 1 strategies. Whether a teacher is even aware of a strategy

is a significant factor that could impact that educator's ability and skill in terms of managing student behavior in the classroom. These categories are discussed in the following paragraphs.

Knowledge of Multi-Tiered System of Supports Tier 1 Strategies

For the category of Foundational Behavior Management Strategies, there were 95 respondents who indicated that they knew about the MTSS Tier 1 strategies under Guidelines for Effective Classrooms Rules/This strategy addressed the components of writing classroom rules in a way that students can understand; but also so that any other individual who enters the classroom is able to read the posted rules, observe, and then easily measure if the students are displaying the expected behaviors. These results indicated a troubling trend. Roughly half of the total respondents (n = 50; 52.63%) indicated they knew about each listed strategy in the category. Thus, it follows that most Saudi teachers do not know about the effective guidelines for creating classroom rules. This is supported by the findings of Alrwaily (2016), who determined that GE teachers encounter difficulty with establishing effective learning environments and implementing effective classroom management techniques due to their lack of knowledge.

The strategies of Knowledge About Surface Management comprise simple, non-intrusive ways teachers can respond to minor disruptive behavior without interrupting the flow of classroom instruction. The respondents to the survey indicated that they knew more about strategies that are reactive to misbehavior, such as removing distracting objects from the setting, verbal signaling, and planned ignoring. However, they did not indicate as much knowledge about the other six strategies that take a more proactive and preventative stance. This finding is supported by those of Al Abduljabber (1994), Al-Fatali (2007) and Alrwaily (2016), which found that most Saudi GE teachers are not aware of strategies to use before challenging behaviors occur and to generally manage behavior in their classrooms.

The survey further inquired of the respondents about their knowledge of strategies specific to using positive consequences. The respondents in this study indicated that they knew more about Providing Reinforcement for Expected Behavior, Providing Rewards for Expected Behavior, and Providing Tangibles for Doing the Expected Behavior. This finding is supported by those of Al Abduljabber (1994), Al-Fatali (2007) and Alrwaily (2016), regarding their conclusions that most Saudi GE teachers are not aware of strategies to use before. Of all the strategy types, this section had the highest frequency of knowledge; but the teachers' responses indicated that they do not use these strategies correctly, which agrees with the findings of other researchers (Al Abduljabber, 1994; Al-Fatali, 2007; Alrwaily, 2016).

The current study found evidence that respondent's knowledge of Using Negative Consequences to Correct Behavior strategy is low. The survey respondents indicated they knew more about Using Explicit Reprimand strategy than others, while the other strategies got the lowest numbers. This means that Saudi GE elementary school teachers are not aware of strategies to use before or when misbehavior occurs for managing behavior in their classrooms

Use of Specific Multi-Tiered System of Supports Tier 1 Strategies

As described in Chapter IV, this study also examined respondents' use of particular MTSS Tier 1 strategies, once they had indicated that they had heard of the strategy. The findings on teacher use indicated that perceptions regarding the use of reinforcement strategies were varied. For example, the first statement on using reinforcement strategies was, "When the whole class follows the rules, I reinforce them in the following ways." Almost half of the participants (47.4%) stated that they used the strategy of providing the whole class with global verbal praise. This finding agrees with that of Georgiou et al. (2002) regarding the use of praise in the classroom, which stated that when teachers give more praise, elementary school-aged students

tend to exhibit more positive behaviors. Specifically, that study found that such a response to good behavior resulted in an overall 30% increase in positive student behavior (Georgiou et al., 2002). However, 25.2% of the respondents indicated that they do not believe it is necessary to reinforce students to perform the expected behaviors. Al-Mousa (2010) also found that teachers held a common perception that classroom rules do not need to be implemented and reinforced in the classroom. That study also revealed that most teachers said they agreed with the use of specific verbal praise and global praise, but did not think it was necessary to reinforce students for doing expected behaviors. These findings indicate a failure in understanding of the use of reinforcement to increase the likelihood of maintaining, increasing, and sustaining expected behaviors.

The responses to the next survey statement indicated a lack of knowledge regarding how to explicitly teach procedures and/or routines. The Ministry of Education previously identified this gap and so the terms of procedures and routines are clearly illustrated in the professional development manual it has published. Teachers were also unable to provide a single example of a procedure and/or routine they teach their students. The examples they provided were examples of rewards, not procedures.

There also appeared to be a lack of knowledge regarding how to use negative consequences. For example, most of the participants responded that the employment of a hierarchy of negative practices was not one of their strategies for correcting behaviors in their classrooms. Moreover, most responded that they did not utilize negative consequences at all. This finding confirmed the research of Alrwaily (2016) and Altamimi (2014), who pointed out that most Saudi teachers are not aware of what a negative consequence was and thus were often using them without understanding the concept, and not employing them with fidelity for

managing or correcting classroom behavior. Only 8.4% of respondents stated that they used a hierarchy of negative consequences to correct behavior. Although some teachers stated that they used negative consequences, when asked to provide an example, they could not do so.

Next, the respondents were asked to address their use of social reinforcement to increase the likelihood of expected student behaviors. Most (74.7%) stated that they did believe in this practice, with the minority (23.2%) stating they do not use or believe students need social reinforcement to do expected behaviors. It was disappointing that the examples provided by the teachers who said they used social reinforcements to reinforce expected behaviors revealed a lack of knowledge about what constituted social reinforcement. Some examples were, Give opportunities to provide assistance in the school, and Communicate with parents to compare classroom and dependent behavior of the student. One individual asked, “How should I manage distraction and aggressive behavior?” Another answered the question with the statement: “Thank you for the insight information provided in the study.”

Where Teachers Learn How to Use Multi-Tiered System of Supports Tier 1 Strategies

The survey obtained teachers' information regarding where they had acquired knowledge of each strategy they indicated they knew about and consistently used. Analysis of their responses regarding the source of their knowledge indicated that Saudi GE teachers at elementary schools did not perceive that they learned strategies from professional development events provided to their school’s district through the Saudi Ministry of Education as a major source of learning. The sources identified were more often informal.

The study provided valuable data on where teachers obtained information on MTSS Tier 1 strategies. The majority of survey respondents who stated they knew a strategy stated that they

primarily learned that knowledge from a local workshop or a colleague who discussed the strategy. As evidenced in the open-ended question at the end of the survey, educators wished to gain more knowledge on these topics but felt limited access. This lack of access is confirmed by the large number who said they learned how to use the strategy by primarily relying on workshops they sought out on their own or discussions with colleagues. This means, unfortunately, that there was no way to confirm that they were employing the strategies they stated they knew about and used in the manner presented by the workshop presenters or that these workshops had provided them with the most complete information on evidence-based practices. The Ministry of Education, formal university training, and other businesses/programs must provide more professional development delivered by accredited individuals who have been examined by the Ministry of Education and found to have expertise in such MTSS Tier 1 strategies. A drawback to the majority of teachers learning how to use these strategies by using just two resources (i.e., a workshop they attended on their own or a colleague), is that while the teacher might have heard about a particular strategy, the sources might not necessarily have provided detailed information, such as the underlying researched principles and fidelity with which to implement the strategies. The individuals providing the training and the implementation fidelity of the strategy being taught are major concerns, especially in a developing country like Saudi Arabia.

Use of Multi-Tiered System of Supports Tier 1 Strategies and Years of Teaching Experience

Demographic data were collected on the teachers' survey and then considered in regard to their knowledge and use of the different MTSS Tier 1 strategies. The researcher used the chi-square to examine the hypothesis of the relationship between general education teachers in Saudi

Arabian elementary schools used of Tier 1 behavioral strategies when students with challenging behaviors were included in their classrooms and their years of teaching experience. The majority of the strategies teachers said they knew about and used did not support Hypothesis 1 as there was no statistical significance to indicate a relationship between years of teaching experience and use of the majority of the Tier 1 strategies. The chi-square test revealed only one instance of statistical significance for strategy use and years of teaching experience -- for the Tangibles for Doing the Expected Behavior strategy. Not only did teachers says they knew about this strategy, but they also used it more, the more years that they had been teaching. Specific data on whether the teachers who indicated that they used the strategies on a consistent basis were actually using the strategies with fidelity were not available.

Findings Related to the Literature

Examined in this section is the study's finding related to the literature on teachers' use of MTSS Tier 1 strategies and how they learned to use them. Given that so many of the respondents selected that they learned how to use the strategies they knew from colleagues, it may do justice to consider using a "Teacher-Teaching-Teachers" model for professional development. The use of Bandura's Social Learning Theory lends itself well to supporting the use of this for professional development, as the teacher respondents indicated they gained much of their knowledge of how to use the strategies based on modeling or interacting with colleagues.

Selected teachers may attend training provided by the Ministry of Education about specific Tier 1 strategies and then commit to returning to their school intent on teaching their colleagues the strategy learned. The use of Bandura's Social Learning Theory could benefit the elementary teachers in Saudi Arabia. The modeling component of teachers seeing a trained

individual teacher using the strategy followed by guided imitation may be a powerful way to implement Tier 1 strategies guaranteeing greater fidelity.

Prior research has also shown that Vygotsky's theory of More Knowledgeable Other helps to create a safe environment for practice and skill development when a subject matter expert is aligned with a willing learner. In these environments, working within the local school buildings with a colleague who is known and has a familiar face may enable teachers to improve their practice.

Recommendations for Future Research

One area for future research would be to examine potential reasons why experienced teachers, in comparison to their novice peers, might perceive themselves as more knowledgeable about MTSS Tier 1 strategies but do not use the strategy. In this study, the findings were that elementary school teachers' did not perceive that they knew most of the strategies presented in the MTSS Tier 1 model. The only exception found was that teachers with more years of experience were more likely to use Tangibles for Doing the Expected Behavior strategy.

Implications for Practice

The findings of this study establish that the majority of Saudi elementary GE teachers did not use classroom management strategies from the MTSS Tier 1 model, nor did they have knowledge of how to use the MTSS Tier1 behavioral management strategies. For example, only 15 (15.79%) respondents indicated they knew about the effective classroom rules guidelines. The chi-square test results did reveal that as teachers gained more years of teaching experience, they were more likely to use the Tangibles for Doing the Expected Behavior strategy they knew.

Most of the respondents indicated they did not know how to use foundational behavior management strategies, even though many indicated they had heard about them. The study also

explored the resources for where teachers had learned how to use Tier 1 strategies if they said they regularly used a specific strategy. The workshops teachers sought out on their own and colleague sharing as the major sources indicate the recommendation that teachers should receive training that has more oversight to guarantee accurate knowledge for the fidelity of implementation. Teachers who learned how to use MTSS Tier 1 behavioral strategies in an accurate manner would be better equipped to meet the cognitive, academic, and social and emotional needs of all students, including those with behavioral challenges. Professional organizations that support professional development should continue to refine their standards to address the importance of colleague sharing time as it relates to an improvement in behavioral management practices. This will allow teachers to develop safer and more successful classroom environments for every student. This study can be expanded in the future to investigate the behavioral and effective strategy needs of GE teachers at higher grade levels.

It is recommended that future researchers extend the study by conducting a mixed-methods research design. By including qualitative components, the researcher would be able to gather data on teachers' perspectives regarding what types of strategies they find to be most beneficial in the classrooms. Exploration of how the strategies can be implemented in culturally responsive ways is another important area of exploration, because the respondents in this study expressed a desire for more information on how to involve parents in behavior management. The cultural differences of the various regions of Saudi Arabia influence teachers' approaches to communicating with parents as well as their use of behavior management strategies.

The results presented from this study should induce leaders in the Saudi government offices that oversee professional development and teacher preparation to examine the role they play and the standards they support. The results also serve as a reminder about the importance of

foundational behavior management strategies. These strategies involve maintenance across the school-wide system and continuous professional development. Understanding the connections between effective behavior management strategy implementation could lead to the successful implementation of new instructional strategies for the inclusion of students with disabilities, especially those with challenging behaviors, in the local school buildings.

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APPENDIX A

SURVEY INSTRUMENT FOR STUDY OF KNOWLEDGE AND USE OF MULTI-TIERED SYSTEM OF SUPPORTS TIER 1 STRATEGIES

SURVEY ON KNOWLEDGE AND USE OF MULTI-TIERED SYSTEM OF SUPPORTS

Q2 I have a BA degree. If Yes, in what major area?

- ○ No (1)
- ○ Yes (2)

Skip To: Q4 If I have a BA degree. If Yes, in what major area? = Yes
Skip To: Q3 If I have a BA degree. If Yes, in what major area? = No

Q3 Thank you for taking this survey. Since you do not have a BA degree, you will not continue.

Skip To: End of Survey If Thank you for taking this survey. Since you do not have a BA degree, you will not continue. Is Displayed

Q4 What was the major area in which you earn your BA degree?

_____

Q5 Name the University where you earned your BA.

_____

Q6 I have a MA degree.

- ○ No (1)
- ○ Yes (2)

Skip To: Q12 If I have a MA degree. = No
Skip To: Q7 If I have a MA degree. = Yes

Q7 What was the major area in which you earn your MA degree?

_____

Q8 Name the University where you earned your MA.

_____

Q9 I have a degree higher than an MA.

- ○ No (1)
- ○ Yes (2)

Skip To: Q10 If I have a degree higher than an MA. = Yes
Skip To: Q12 If I have a degree higher than an MA. = No

Q10 What is your degree (e.g., PhD) higher than a MA and in what major area?

_____

Q11 Name the University where you earned your higher education degree

_____

Q12 What elementary schools grade(s) have you in the past and currently teach? Write the number of year(s) in each of the K-6 grade levels

- [ ] Kindergarten (8) _____
- [ ] 1st grade (9) _____
- [ ] 2nd grade (10) _____
- [ ] 3rd grade (11) _____
- [ ] 4th grade (12) _____
- [ ] 5th grade (13) _____
- [ ] 6th grade (14) _____

Q13 Total years taught

- ○ Less than one year (1)
- ○ 1-5 years (2)
- ○ 6-10 years (3)
- ○ 11 or more (4)

Q14 My age range in years is this many years

- ○ (21-25) (1)
- ○ (26-30) (2)
- ○ (31-35) (3)
- ○ (36-40) (4)
- ○ (41-45) (5)
- ○ (46 & older) (6)

Q15 Are students with misbehaviors included in your classroom? This means students who do anything that distracts from their learning or the learning of others.

- ○ No (1)
- ○ Yes (2)

Skip To: End of Survey If Are students with misbehaviors included in your classroom? This means students who do anything th... = No

Q16 Have you attended professional development workshops related to behavioral management techniques?

- ○ No (1)
- ○ Yes (2)

Q17 On the following pages, you are going to see names of behavior management strategies. Answer the questions about each one of the strategies. You will be asked if you know about the strategy. If you answer you do know, you will be asked to give information on how you learned and use the strategy. Are you ready to proceed?

- ○ Yes I am ready (4)

Q18 Redirect inappropriate behavior on the spot

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q19 If Redirect inappropriate behavior on the spot = I know about this strategy

Skip To: Q21 If Redirect inappropriate behavior on the spot = I do not know about this strategy

Q19 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q21 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q20 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q21 Ignore misbehavior that is non-disruptive to class

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q22 If Ignore misbehavior that is non-disruptive to class = I know about this strategy

Skip To: Q24 If Ignore misbehavior that is non-disruptive to class = I do not know about this strategy

Q22 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q24 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q23 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q24 Use non-verbal cues to stop the student's misbehavior.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q25 If Use non-verbal cues to stop the student's misbehavior. = I know about this strategy

Skip To: Q27 If Use non-verbal cues to stop the student's misbehavior. = I do not know about this strategy

Q25 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q27 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q26 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q27 Use verbal cues to stop the student's misbehavior.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q28 If Use verbal cues to stop the student's misbehavior. = I know about this strategy

Skip To: Q30 If Use verbal cues to stop the student's misbehavior. = I do not know about this strategy

Q28 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q30 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q29 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q30 Reduce the distance between me and the student to help the student to control own behavior.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q31 If Reduce the distance between me and the student to help the student to control own behavior. = I know about this strategy

Skip To: Q33 If Reduce the distance between me and the student to help the student to control own behavior. = I do not know about this strategy

Q31 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q33 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q32 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q33 Use students' personal interests to motivate them to continue working on the assignment.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q34 If Use students' personal interests to motivate them to continue working on the assignment. = I know about this strategy

Skip To: Q36 If Use students' personal interests to motivate them to continue working on the assignment. = I do not know about this strategy

Q34 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q36 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q35 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q36 Move objects away from the students who are distracted by them.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q37 If Move objects away from the students who are distracted by them. = I know about this strategy

Skip To: Q39 If Move objects away from the students who are distracted by them. = I do not know about this strategy

Q37 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q39 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q38 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q39 Send the misbehaving student to do some other activity in order permit them time to regain composure and control over his/her behavior.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q40 If Send the misbehaving student to do some other activity in order permit them time to regain compos... = I know about this strategy

Skip To: Q42 If Send the misbehaving student to do some other activity in order permit them time to regain compos... = I do not know about this strategy

Q40 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q42 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q41 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q42 Write classroom rules with students the first week of school.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q43 If Write classroom rules with students the first week of school. = I know about this strategy

Skip To: Q45 If Write classroom rules with students the first week of school. = I do not know about this strategy

Q43 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q45 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q44 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q45 Prepare classroom rules to present to students the first week of school.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q46 If Prepare classroom rules to present to students the first week of school. = I know about this strategy

Skip To: Q48 If Prepare classroom rules to present to students the first week of school. = I do not know about this strategy

Q46 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q48 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q47 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q48 Classroom rules are posted where all students can see them.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q49 If Classroom rules are posted where all students can see them. = I know about this strategy

Skip To: Q51 If Classroom rules are posted where all students can see them. = I do not know about this strategy

Q49 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q51 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q50 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q51 Classroom rules are written in positive statements.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q52 If Classroom rules are written in positive statements. = I know about this strategy

Skip To: Q54 If Classroom rules are written in positive statements. = I do not know about this strategy

Q52 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q54 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q53 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q54 Increase the distance between me and the student to help the student to control own behavior.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q55 If Increase the distance between me and the student to help the student to control own behavior. = I know about this strategy

Skip To: Q57 If Increase the distance between me and the student to help the student to control own behavior. = I do not know about this strategy

Q55 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q57 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q56 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q57 No more than five classroom rules are used at one time.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q58 If No more than five classroom rules are used at one time. = I know about this strategy

Skip To: Q60 If No more than five classroom rules are used at one time. = I do not know about this strategy

Q58 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q60 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q59 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q60 Negative consequences are used to decrease challenging behaviors.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q61 If Negative consequences are used to decrease challenging behaviors. = I know about this strategy

Skip To: Q63 If Negative consequences are used to decrease challenging behaviors. = I do not know about this strategy

Q61 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q63 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q62 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q63 Classroom rules are written in terms that allows anyone to see students doing the behavior.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q64 If Classroom rules are written in terms that allows anyone to see students doing the behavior. = I know about this strategy

Skip To: Q66 If Classroom rules are written in terms that allows anyone to see students doing the behavior. = I do not know about this strategy

Q64 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q66 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q65 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q66 Classroom rules are written in a way that can be easily measured.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q67 If Classroom rules are written in a way that can be easily measured. = I know about this strategy

Skip To: Q69 If Classroom rules are written in a way that can be easily measured. = I do not know about this strategy

Q67 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q69 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q68 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q69 Classroom rules are written in a way that describes the behavior students are expected to display.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q70 If Classroom rules are written in a way that describes the behavior students are expected to display. = I know about this strategy

Skip To: Q72 If Classroom rules are written in a way that describes the behavior students are expected to display. = I do not know about this strategy

Q70 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q72 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q71 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q72 Students are taught the consequences of breaking the classroom rules.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q73 If Students are taught the consequences of breaking the classroom rules. = I know about this strategy

Skip To: Q75 If Students are taught the consequences of breaking the classroom rules. = I do not know about this strategy

Q73 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q75 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q74 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q75 Students who breaks a classroom rule received a reminder of the rule.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q76 If Students who breaks a classroom rule received a reminder of the rule. = I know about this strategy

Skip To: Q78 If Students who breaks a classroom rule received a reminder of the rule. = I do not know about this strategy

Q76 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q78 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q77 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q78 Students are reinforced when they do expected behaviors.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q79 If Students are reinforced when they do expected behaviors. = I know about this strategy

Skip To: Q81 If Students are reinforced when they do expected behaviors. = I do not know about this strategy

Q79 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q81 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q80 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q81 Rewards are provided for students when they do expected behaviors.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q82 If Rewards are provided for students when they do expected behaviors. = I know about this strategy

Skip To: Q84 If Rewards are provided for students when they do expected behaviors. = I do not know about this strategy

Q82 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q84 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q83 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q84 Tangible reinforcement are given to the encourage students to do expected behaviors.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q85 If Tangible reinforcement are given to the encourage students to do expected behaviors. = I know about this strategy

Skip To: Q87 If Tangible reinforcement are given to the encourage students to do expected behaviors. = I do not know about this strategy

Q85 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q87 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q86 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q87 Positive strategies are used first before negative consequences to help control challenging behaviors.

- ○ I know about this strategy (1)
- ○ I do not know about this strategy (2)

Skip To: Q88 If Positive strategies are used first before negative consequences to help control challenging behav... = I know about this strategy

Skip To: Q90 If Positive strategies are used first before negative consequences to help control challenging behav... = I do not know about this strategy

Q88 Where did you learn about this intervention?

- [ ] I only heard of it, I don't know how to use it (1)
- [ ] a website on the Internet (2)
- [ ] a colleague shared it with me (3)
- [ ] I read about it in a book (4)
- [ ] a university class (5)
- [ ] a workshop on behavior management (6)
- [ ] a professional development (7)

Skip To: Q90 If Where did you learn about this intervention? = I only heard of it, I don't know how to use it

Q89 How often do you use this intervention?

- ○ 3-5 times a week (1)
- ○ 2-3 times a week (2)
- ○ Once a week (3)
- ○ Never (4)

Q90 When the whole class follows the rules, I reinforce them in the following ways (click all that apply):

- [ ] I do not believe I have to reinforce students for following the rules (1)
- [ ] The whole class receives global verbal praise (2)
- [ ] The whole class receives a specific verbal praise (3)
- [ ] The whole class receives non-verbal reinforcement (4)

☐ The whole class global receives a tangible reward (5)

Q91 When individual students follow the rules, I reinforce them in the following ways (click all that apply).

☐ I do not believe I have to reinforce students for following the rules (1)

☐ The individual student receives global verbal praise (2)

☐ The individual student receives a specific verbal praise (3)

☐ The individual student receives non-verbal reinforcement (4)

☐ The individual student receives a tangible reward (5)

Q92 In my classroom, I explicitly teach procedures or routines.

○ No (1)

○ Yes (2)

Skip To: Q94 If In my classroom, I explicitly teach procedures or routines. = No

Skip To: Q93 If In my classroom, I explicitly teach procedures or routines. = No

Q93 If you explicitly teach procedures, write one example of the steps of one procedure you teach.

_____

_____

_____

_____

_____

Q94 In my classroom, I use a hierarchy of negative consequences when a student misbehaves.

- ○ No, I do not use negative consequences at all. (1)
- ○ Yes, I use a hierarchy of negative consequences when a student behaves. (2)
- ○ I use negative consequences, but I do not use a hierarchy. (3)

Skip To: Q95 If In my classroom, I use a hierarchy of negative consequences when a student misbehaves. = Yes, I use a hierarchy of negative consequences when a student behaves.

Skip To: Q96 If In my classroom, I use a hierarchy of negative consequences when a student misbehaves. = No, I do not use negative consequences at all.

Skip To: Q96 If In my classroom, I use a hierarchy of negative consequences when a student misbehaves. = I use negative consequences, but I do not use a hierarchy.

Q95 Write the hierarchy of negative consequences that you use in your classroom here.

_____

_____

_____

_____

_____

Q96 The statement that best reflects how I feel about using social reinforcement to encourage students to do the appropriate behavior is

- ○ No, I do not use or believe students need social reinforcement to do the appropriate behavior. (1)
- ○ Yes, I use social reinforcement to help my students do the appropriate behaviors. (2)

Skip To: End of Survey If The statement that best reflects how I feel about using social reinforcement to encourage student... = No, I do not use or believe students need social reinforcement to do the appropriate behavior.

Skip To: Q97 If The statement that best reflects how I feel about using social reinforcement to ecourage student... = Yes, I use social reinforcement to help my students do the appropriate behaviors.

Q97 One example of the social reinforcement I use is……

_____

_____

_____

_____

_____

Q98 What information did I not ask that you feel is important for me to know about behavioral management strategies within the classroom?

_____

APPENDIX B

CONSENT FORM

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title:	The Knowledge and Use of MTSS Tier 1 Behavioral Management Strategies by Teachers in Saudi Arabia When Student with Behavioral Challenges are Included in The Classroom

Researcher:	Jehad Alnoaim, School of Special Education
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Research Advisor:	Francie R. Murry, Ph.D.
Email:	francie.murry@unco.edu
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My name is Jehad Alnoaim, and I am a doctoral student at the University of Northern Colorado. You are invited to participate in my study to investigate general education teachers' knowledge of MTSS Tier 1 behavioral management strategies when students with behavioral needs are included in the classroom. Your participation will include completing a Qualtrics survey regarding your knowledge and your use of MTSS Tier 1 behavioral management strategies to identify whether there are specific MTSS Tier 1 strategies that you use in these circumstances, and whether certain personal characteristics (e.g., years of teaching experience) correlate with your use of MTSS Tier 1 behavioral management strategies, as well as where you learned to use those strategies. The Qualtrics survey may take from 15 to 20 minutes to complete.

I will take every precaution to protect the confidentiality of your survey responses as a participant. Although confidentiality cannot be completely guaranteed due to the nature of electronic data collection, all possible precautions will be taken. Specifically, once the data are collected, the responses will be kept confidential to the best of my ability, and all results will be reported in group form so that individual responses cannot be associated with any specific participant to protect personally identifiable information. All identifying information will be stripped from the data and the data will be stored in a password protected electronic file. No personally identifiable information will be used. All files associated with the study will be stored in a password protected file in my research advisor's office for a minimum of three years following the conclusion of the study, as per human participant research regulations.

While there is no direct benefit to participation, you may find that you enjoy talking about what you do and sharing your perceptions. Also, the information you provide may be used to contribute to the field of education by providing information about teachers' knowledge and use of MTSS Tier 1 behavioral management strategies when students with behavioral needs are present in their classrooms.

The risks are minimal and not associated with participating in this study outside of what might occur in a common conversation about work in schools encountered during normal classroom activities and practices. The cost for participating in this study is the time invested in participating in completing the survey questions. Participants who complete the study will be included in a drawing for an Ugee M708 Digital Tablet Graphics Drawing Tablet, but no other compensation will be provided to participants in this study.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please complete the questionnaire if you would like to participate in this research. By completing the questionnaire, you give your permission to be included in this study as a participant. You may keep this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, the Office of Research, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1910.

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY OF
NORTHERN COLORADO

Institutional Review Board

Date:	09/18/2020
Principal Investigator:	Jehad Alnoaim
Committee Action:	**IRB EXEMPT DETERMINATION – New Protocol**
Action Date:	09/18/2020
Protocol Number:	2007007475
Protocol Title:	The Knowledge and Use of MTSS Tier 1 Behavioral Management Strategies by Teachers in Saudi Arabia When Student With Behavioral Challenges Are Included in the Classroom
Expiration Date:	

The University of Northern Colorado Institutional Review Board has reviewed your protocol and determined your project to be exempt under 45 CFR 46.104(d)(702) for research involving

Category 2 (2018): EDUCATIONAL TESTS, SURVEYS, INTERVIEWS, OR OBSERVATIONS OF PUBLIC BEHAVIOR. Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by 45 CFR 46.111(a)(7).

You may begin conducting your research as outlined in your protocol. Your study does not require further review from the IRB, unless changes need to be made to your approved protocol.

As the Principal Investigator (PI), you are still responsible for contacting the UNC IRB office if and when:

APPENDIX D

HAIL SCHOOL DISTRICT APPROVAL

وزارة التعليم

إلى من يهمه الأمر:

أنا الأستاذ مسعد الشمري،

أوافق على إرسال رابط إستبيان الدراسة الخاصة بالزميل جهاد عبدالله النعيم، إلى معلمين التعليم العام للمرحلة الإبتدائية ودعوتهم للمشاركة بهذه الدراسة.

To whom it might concern

This is Masad Alshammari, a principal of Hail elementary general education schools. I am willing to disseminate the survey link from Mr. Jehad Abdullah Alnoaim in regarding his doctoral study to all general education elementary teachers who are working I Hail region.

Masad Alshammari
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