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## STRATEGIES TO ASSIST IN DECREASING ESCAPE MAINTAINED BEHAVIORS IN CHILDREN WITH AUTISM SPECTRUM DISORDER

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STRATEGIES TO ASSIST IN DECREASING ESCAPE  
MAINTAINED BEHAVIORS IN CHILDREN WITH  
AUTISM SPECTRUM DISORDER

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A Thesis  
Presented to the  
Faculty of  
California State University,  
San Bernardino

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
in  
Education:  
Special Education

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by  
Kimberlee Anne Luke

June 2017

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## ABSTRACT

Many children with ASD partake in escape maintain behaviors for numerous reasons. Children with autism might have difficulty attending to long tasks, can get overwhelmed with novel activities, and the challenging behaviors may heighten when too many demands are placed on them. As a result, teachers, parents and interventionists may start to witness children's challenging behaviors increase. Many of the challenging behaviors are thought to have an escape function from the long or difficult task at hand. This paper will find and address various strategies that may be applied to decrease escape maintained behaviors in children with ASD. The aim for this review study is to describe and evaluate research findings of antecedent-based strategies and evidence-based practices used to assist in decreasing escape maintained behaviors in children with ASD. This study is to suggest educational implications for interventionists and parents.

*Keywords:* autism, escape, escape maintained behaviors, decrease challenging behaviors, alternative behaviors, antecedent based intervention, evidence based practices

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# CHAPTER ONE

## INTRODUCTION

### Problem Statement

Children diagnosed with autism started to rise in numbers starting in the 80's. Recent studies show the approximate ratio of children affected. According to Christensen et al. (2016), "Approximately one in 68 children aged 8 years living in sites participating in the Autism and Developmental Disabilities Monitoring (ADDM) Network surveillance areas met the ASD case criteria for the 2012 surveillance year" (p.12). The American Psychiatric Association (2013), define ASD as "a series of developmental disabilities characterized by impairment in social communication and interaction skills, accompanied by the existence of repetitive behaviors or activities, such as rocking movements, hand clapping or obsessively arranging personal belongings" (as cited in Frasier-Robinson, 2015, p. 113). Every autistic child is affected in a different way, which is why teachers, interventionists, and parents need to be familiar with multiple strategies that they can practice to decrease escape maintained behaviors. Each individual will react to each strategy in a unique way allowing the strategy to be effective or not depending on the specific individual and their needs.

Children with ASD experience various developmental disabilities creating numerous challenges in their learning and daily lives. Matson, Wilkins, and Macken (2009) state, "Challenging behavior is more common among children



with ASD than among typically developing children or children with other developmental disabilities” (as cited in Rispoli et al., 2013, p. 67). Since it is common for children with ASD to display challenging behaviors, it is essential for interventionists/parents to apply strategies to help decrease challenging behaviors. One specific type of challenging behavior that will be reviewed in more detail is escape maintained behaviors. According to Love, Carr, and LeBlanc (2009), they “found that escape was the second most common function of problem behavior, identified for 50% of 32 children with autism spectrum disorders” (as cited in Geiger, Carr, & LeBlanc, 2010, para. 1). With escape acting as one of the top functions of problem behavior, it must to be brought to the attention of interventionists/parents. This study will allow interventionists/parents to be more knowledgeable of specific strategies they can use to decrease this popular behavior. According to Butler and Luiselli (2007), “Behavior is described as *escape motivated* when it terminates an unpleasant or non-preferred interaction” (p.195). Many children with autism have a challenging time transitioning and interacting in non-preferred activities, overwhelming situations that occur in their least restrictive environment, new activities that are implemented, routines that get altered, or they may get frustrated when excessive new demands are placed on them. As a consequence, many children participate in challenging behaviors when an excessive amount of demands are placed on the child, which can lead to escaping activities that are non-preferred.

Without using extinction because it is consequence based, what antecedent-based strategies and evidence-based practices can interventionists/parents use to address escape-motivated behaviors in children with ASD and decrease occurrences? In my research, I aim to describe strategies that will decrease escape-motivated behaviors in children with ASD. One hypothesis advanced by Kern, Choutka, and Sokol (2002), is implementing antecedent-based intervention within a child's regular schedule and routine. This allows the child to learn specific interventions in their daily routine to help decrease escape-motivated behaviors. Thus, in this study, various antecedent-based interventions and evidence-based practices were analyzed to determine whether implementing these strategies into a child diagnosed with ASD routine would in fact, help decrease challenging behaviors particularly, escape maintained behaviors. This study will build on describing particular strategies, which have been effective in assisting children with ASD and have reduced escape maintained behaviors. Interventionists/parents can support these children through introducing various strategies such as several antecedent-based interventions and evidenced-based practices to help decrease escape maintain behaviors. According to Kern et al. (2002), it has been proven that when one can define what exactly is setting the child off while displaying a more appropriate behavior instead then that antecedent-based intervention may eliminate challenging behaviors. If the interventionist/parent can replace the problem behavior with an appropriate behavior, the child can learn to use the appropriate

behavior in its place diminishing the problem behavior. Various other studies will be mentioned to discuss these strategies that were successful in reducing challenging behaviors in children with ASD.

One problem in this study is that children with autism may be classified from mild to moderate or moderate to severe. The range of the child's ability can be broad. A strategy successfully performed on one child may not have the same effect on a different child with ASD because each child displays different components and characteristics of the diagnosis. As a whole, all strategies mentioned have been specifically designed to work effectively and should be implemented in classrooms/homes for children with autism in their least restrictive environment.

#### Purpose of the Study

The purpose of this review study was to describe and analyze effective antecedent-based strategies and evidence-based practices that will reduce the escape behaviors in a child with autism and allow the child to participate in certain tasks, activities, and situations while flourishing in any environment. If this were found to be true, then greater efforts might be made to encourage interventionists/parents to use these specific antecedent-based strategies throughout the child's day. When interventionist/parents effectively intervene before a challenging behavior becomes extreme or by preventing the behavior such as escape from even occurring, then it would be great success in helping children with ASD function in the real world.

## Methods

Research was conducted through an electronic library using two databases: EBSCOhost and Educational Resource Information Center (ERIC). At first, search terms were broad and over 10,000 articles were identified, but after gaining a clear idea of the topic more articles were searched using significant keywords such as: autism, escape, escaped maintained behaviors, decrease challenging behaviors, alternative behaviors, antecedent-based intervention, and evidence-based practices. In using the advanced search on EBSCOhost, I was able to narrow my search down to 100 articles. From there I continued to use the advanced search on EBSCOhost using different combinations of my keywords to narrow it down even more. Multiple article abstracts were judiciously read and chosen that would support the study. In my final review about 55 articles were included. Once articles were selected, each full article was read and analyzed determining which parts of the article would support the study. Another key component was finding facts about the topic of escaped maintained behaviors in children with autism. Antecedent-based as well as evidence-based strategies may be used to help decrease these challenging behaviors. Reference pages from the articles were also viewed in order to find more articles on particular topics. This study is to suggest educational implications for classroom teachers, interventionists, and parents.

## Evidence-Based Practices

Evidence-based practices (EBP) are commonly used while working with children diagnosed with ASD. EBP's are valid and reliable strategies. According to Wong et al. (2015), the authors found 27 focused intervention practices that met the criteria for evidence-based practice (EBP). EBP's are scientifically proven to support children with ASD function successfully within their learning environment.

Wong et al. (2015) proves the following:

Evidence-based practices consist of interventions that are fundamental applied behavior analysis techniques (e.g., reinforcement, extinction, prompting), assessment and analytic techniques that are the basis for intervention (e.g., functional behavior assessment, task analysis), and combinations of primarily behavioral practices used in a routine and systematic way that fit together as a replicable procedure (e.g., functional communication training, pivotal response training). (p. 1957)

Only a few of these practices will be mentioned where research articles were found to support decreasing escape maintained behaviors. The few practices in which research was found to decrease escape maintained and challenging behaviors include: antecedent-based interventions, functional behavior assessment, time delay, task analysis, reinforcement, and visual supports.

## Antecedent-Based Intervention

Antecedent-based intervention (ABI) approaches can be extremely beneficial when decreasing intrusive behaviors while children increase their involvement in appropriate and acceptable behaviors. These type of strategies involve making adjustments in the child's routine or environment that may help eliminate specific triggers of challenging behaviors as well as to provide the child with opportunities to replace their behaviors. ABI strategies are easy to implement and can be practiced by anyone who works or lives with ASD children. Another advantage to using antecedent-based intervention is the fact that these strategies work across multiple age ranges of children with ASD. Although studies have shown that escape extinction is effective, ABI strategies show there are other approaches that can be just as successful. Antecedent-based intervention is strategies that involve altering the antecedent events before the problem behavior occurs. When the interventionists/parents can alter the antecedent to the escape maintained behaviors this prevents and diminishes the behavior from occurring.

An ABI technique to escape-maintained challenging behavior is influencing antecedent demand circumstances (i.e. modifications within curriculum, instructional design and environment, social organization) so the child finds instruction more enjoyable and less frustrating fueling the desire to escape.

When antecedent-based intervention strategies are implemented, it helps educate the child with ASD to use appropriate alternative behaviors before

the challenging behavior occurs. This decreases the chances of the challenging behavior from occurring and increases the child's motivation to learn (Kodak, Miltenberger, & Romaniuk, 2003; Vollmer, Marcus, & Ringdahl, 1995).

After implementing antecedent-based strategies, children with ASD learn appropriate behaviors in place of their challenging behaviors.

Antecedent-based intervention has various techniques to implement, which will decrease escape maintained behaviors. According to Bulter and Luiselli (2007), some of the techniques include scaffolding tasks, intertwining novel task into child's learnt tasks, and spending less time for instructions (p. 195). These are just a few of the strong manipulations that can be applied to the child's day while working on decreasing escape maintained behaviors. "When the context for escape behavior was examined Hanley et al. (2003) noted that idiosyncratic antecedent events, such as task difficulty, lack of choice among tasks, social variables, and curricular factors frequently served to signal the reinforcing value of escape" (Blakeley-Smith, Carr, Cale, & Owen-Deschryver, 2009, p. 132). These negative antecedent events functioned as the result of escape maintained behaviors to appear. These antecedent events can be improved and enhanced to where the behavior is reduced.

There are several additional antecedent-based strategies to implement in the classroom or at home. According to Michael (1993), the objective of antecedent-based interventions is to create a procedure to decrease challenging

behavior prior to its occurrence. These strategies include: rearranging the environment, keeping a routine and set schedule, altering ways instruction is administered, providing children access to sensory stimuli, offering choices throughout the day, finding items to increase interest level or discovering highly preferred activities, and implementing pre-activity interventions. The antecedent-based strategies will be discussed and reviewed in further detail.



## CHAPTER TWO

### ANTECEDENT-BASED INTERVENTIONS

#### Complexity of Task Requirements

Children with autism have various developmental disabilities making complex tasks and requirements challenging and frustrating. The complicated tasks trigger problem behaviors, which lead to escaping the activity. According to Blakeley-Smith et al. (2009), some techniques to use include making tasks short and concise, giving children a variety of activities to work and learn from, corresponding the students ability with the task requirements, using the students interests to develop tasks, and offering students to make choices (p. 132). All of these antecedent strategies mentioned have been proven to decrease triggering behaviors in children with ASD.

Reducing task length, allows children with ASD to decrease any frustrations they could be feeling from the lengthy, difficult task thus minimizing challenging behaviors that may be exhibited for the purpose of escaping the situation. It is critical to understand that most children with ASD may have short attention spans. In the child's least restrictive environment, the interventionist/parent should collect baseline data on the child's duration of attention to a task or activity, this is to discover how long they can sit and attend to an activity. After a baseline is determined, it will be easier to establish an appropriate length for the task. Behaviors can get heightened quickly;

interventionists/parents need to be aware of early signs that the child starts displaying before the overall problem behavior appears. Research by Butler and Luiselli (2007), recommend giving children tasks that are simple and short as they work their way up to more complex tasks without displaying challenging behaviors. This allows children to work at their fullest ability and can progress to more complicated tasks when deemed necessary and appropriate. If a task is too difficult for a child, behaviors are going to occur because frustration is going to be evident causing the child to escape the task.

When the interventionist/parent gradually scaffolds demands into simpler and shorter segments, one may observe the child's acceptance for instruction and the interventionist/parent can expand the task at the rate they feel is best suited for the child. According to Butler and Luiselli (2007), "The gradual fading of task requests was conceived as a method of increasing tolerance for instruction while simultaneously decreasing escape" (p. 197). As the child starts establishing tolerance for completing a simple task, a more complex task can then be introduced, or a continuation of the previous skill can be taught which may require more of the child's time and attention. This approach may allow the child to stay motivated and more focused, so that he/she may be less likely to become overwhelmed or discouraged, and thus less probable to participate in challenging behaviors in an attempt to escape the task. Scaffolding breaks tasks into smaller/shorter sections and may help children with ASD to be more attentive and engaged in the task.

Interventionists/parents should be presenting tasks that are appropriate for each individual child. All children learn at different paces especially children with autism. Tasks should be based on the individual child's ability. For example, because one child with ASD can multiply does not mean all children with ASD can multiply. When proposing tasks to children, modifications need to be made to the curriculum to meet the child where they are at cognitively. In doing so, escape maintained behaviors would decline and task achievement would increase.

Some children with ASD are considered high functioning. A high functioning autistic child may be displaying problem behaviors simply because a task is "too" easy. If the task is too easy, modifications of the task should be shaped appropriately to fit the child's cognitive ability. Tasks that are excessively easy trigger challenging behaviors and an incline of escaping the task takes place. Task demands should be created to be appropriate for each child developmentally.

#### Embedding Novel Tasks and Incorporating Task Variations

Many ASD learners do not cope well with new tasks. Introducing new tasks to the child should be presented strategically. According to Carr et al. (1976), "By embedding activities that evoke challenging behavior within a schedule of activities that are not associated with challenging behavior, we may reduce the probability of such behavior occurring during ongoing instruction" (as

cited in O'Reilly, Sigafos, Lancioni, Edrisinha, & Andrews, 2005, p. 306).

Interventionists/parents need to observe the new activities that spark challenging behavior and intertwine them into activities that are enjoyable for the child to reduce behaviors. This provides the child a feeling of success and satisfaction. Interventionists/parents must scaffold tasks so they seem more manageable for the child to where they are able to remain on-task. Also, the mastered tasks and activities start to become the child's preferred tasks because they can now successfully finish it, making that task more enjoyable. When mastered tasks are embedded before or after a novel task is presented, the child is more willing to finish the novel task without escaping or displaying challenging behaviors.

In the study from Winterling, Dunlap and O'Neill (1987), it displayed that lower rates of problem behaviors occurred when varied tasks were incorporated compared to constant task conditions. One of the figures in the study showed when varied tasks were introduced behaviors declined to zero. According to Winterling et al. (1987), "The first study provided empirical evidence that the aberrant responding of two severely handicapped and autistic children could be reduced with a simple, non-punitive strategy of task variation" (p. 111). The current studies' target tasks were interspersed with additional tasks that had been mastered by the students during previous instruction, which then decreased behaviors.

Embedding novel activities with tasks that have been previously learned is an antecedent-based intervention that assists in decreasing challenging

behaviors that can result in escape from a task. It allows the child not to become overwhelmed when participating in a new activity since a portion of the task has already been mastered. The child may find comfort in the fact that the task and materials are familiar and they already understand how to complete the task successfully. According to Gunter et al. (1993), "Task difficulty is one of the primary curricular variables that can set the occasion for problem behaviors in the classroom" (as cited in Umbreit, Lane, & Dejud, 2004, p. 13). With this being known, interventionists/parents need to work on various strategies to break down the difficulty of the task to decrease and prevent problem behaviors from starting. New tasks may appear to be overwhelming for a child with ASD but these challenging tasks can be a success by making appropriate accommodations that fit each individual child's ability.

It is important to incorporate multiple mastered tasks in between working on the novel task. Children should have fun, be motivated, and feel accomplished when completing a task. The interventionist/parent ought to embed the child's mastered tasks among new tasks, which may help the child to remain focused and engaged in the new task/activity. Interventionists/parents who embed novel tasks into already mastered tasks may provide the child with confidence, which keeps them motivated in completing the task, thus challenging behaviors decline. With confidence and motivation instilled in the child, it may help the child to complete a task effectively without escaping. When the new task is presented it can be less challenging and overwhelming because the child may be starting off

the task with more self-confidence, enthusiasm, motivation, and independence without contemplating to avoid the task.

### Decreased Instruction Time

Interventionists/parents should structure their instruction time when working with children with ASD. In keeping the instructional demands short and concise, children can stay focused and on-task. According to Derby et al. (1992), children often escape task demands when instruction is delivered. Children with ASD may have short attention spans. It is vital the interventionist/parent do not spend an overabundance of time giving instructions, instructions given to the learner should be short and concise. When instruction time is reduced it permits children to stay on-task and engaged displaying positive behaviors until they learn to extend their attention spans for longer periods. According to McCoy, Mathur, and Czoka (2010), "The longer the student is off-task, the less time exists for engaging in opportunities for learning" (p. 22). For example, a teacher is running a 15-minute large group there may be many distractions in the immediate area such as; social intimidation because there are more pupils' beside them, a student is sitting beside a loud peer, and an over stimulated environment with excessive pictures or posters hanging on walls. Even with these distractions interventionists expect the students listen, follow, and attend to the teacher directions. With all of the aforementioned distractions during large group time it may be challenging for children with ASD to remain engaged,

especially if the teacher is giving complex and lengthy instructions; thus leading to the child to be more likely to engage in challenging, escape maintained behaviors.

Instructional time needs to be short and concise and the educator should use language familiar to the learner. For example, if a child only speaks in single words then the interventionist should also be using one to two word phrases when giving instructions. Using short and concise instructions as well as familiar language may allow the child to gain a better understanding of the instructions being given without being overwhelmed with too many unknown words to process and understand.

Interventionists/parents can also present instructions in the form of visual cues. McCoy et al. (2010) found, "Visually cued instruction uses graphic cues, often pictures or images in combination with print, showing the sequence of expected behavior and can be used to organize time effectively for children with disabilities" (p. 23). Interventionists/parents need to provide children with ASD visual cues to help reduce frustration when comprehending instructions. This method provides children to stay on-task decreasing escape maintained behaviors because they are visually able to process the instructions. Children are able to anticipate what the upcoming activities are when visually cued instructions are provided by the interventionist/parent, which allows the child to gain more independence (Herman, McIntosh, & Sanford, 2004). Visually cued instruction is a great way for children with ASD to foresee what is expected of

them. Children with ASD are visual learners. When providing them with visual cues, children are able to process the instructions more clearly. They are short and simple for the child to understand.

### Providing Choices

An antecedent based intervention is providing children with choices. It is important to give children with ASD choices within their daily routine. These choices can be small and simple but by doing so children's escape maintained behaviors decrease.

Rispoli et al. (2013) study found some choices may include:

Offering children with ASD choices between activities (e.g., working on math or English), instructional materials (e.g., using a pen or pencil), or environmental arrangements (e.g., where to sit) has been shown to reduce challenging behavior maintained by escape from task demands (p. 66).

These are all useful examples of ways to incorporate choices for children. It can be naturally accomplished when completing tabletop tasks, activities, playtime, or lunch. Choices can be as simple as asking what color crayon to color with, what book to read, sandwich or pizza, or to swing or slide. Teachers, interventionists, and parents should provide opportunities for children to make choices all throughout their day. This allows children to feel apart of the decision-making process reducing escape maintained behaviors.



Choices motivate children to display positive behaviors because they feel a part of the lesson. Research conducted by Vaughn and Horner (1997), “Suggest that the choice itself and not simply just the student’s preference for the choice options were responsible for reducing challenging behavior” (Rispoli et al., 2013, 67). Offering choices creates children the ability to feel engaged and like their voice is heard as well as making it desirable by taking their interests into consideration. Choices may help to decrease any challenging behaviors exhibited to escape the task. When increasing engagement and children’s interest as they complete a task or activity, students challenging behaviors are likely to decline.

Choice making teaches independence in children, which then reduces problem behaviors. If children feel their voice matters it boosts their confidence promoting independence. Children then do not rely on adults to tell them what or how to do an activity. Providing children with choices can affect them in many aspects of their life and thus lead to positive behaviors instead of escape maintained behaviors. When children are given the opportunity to make choices it can allow them to become more independent. Children who are given options are more likely to participate and comply in an activity or task. “Higher rates of problem behavior were observed when students were required to complete less preferred tasks” (Kodak, Lerman, Volkert, & Trosclair, 2007, p. 37). Once choices are given the child may feel that they have some control of the situation and are allowed the opportunity to express his/her needs and wants. This could lead to a

desire to participate because they made the choice. Promoting choices allow positive behaviors to increase while diminishing challenging escape behaviors during tasks.

Research has classified two types of choices that can be provided for children. The first is “across-activity choices” and the second is “within-activity choices” (Rispoli et al., 2013, p. 68). Research by Rispoli et al. (2013) has shown that both of these types of choices have shown to be effective in decreasing challenging escape behaviors. The first type is “across-activity choices” which lets children pick a different activity they want to engage in. For example, the interventionist/parent could allow the child to choose between completing a history assignment or writing a paper. The interventionist/parent may provide the child with one to four tasks allowing the child to select which task they prefer to complete first. When the child is able to choose what task to complete first it assists in increasing positive behaviors. If the interventionists/parents start with a task the child selects, it entices the child to stay on-task reducing escape maintained behaviors. The child’s choice is possibly the child’s preferred task maintaining their interest to the point where escape is not even a consideration.

The second is within-activity choices. According to Rispoli et al. (2013), within-activity choices is when the child is able to choose what materials they will complete the activity with (e.g., crayon or paint) (p.68). It can also mean giving the child a choice where (environmentally) they want to complete the activity (e.g., outside or on the floor) (Rispoli et al., 2013, p. 68). The

interventionist/parent chooses what task is going to be completed first but the child is allowed to decide how they would like to complete the task, where they would like to complete the task, and what materials they wish to use to compete it. For example, an interventionist chooses the task to complete a jigsaw puzzle. The child now has the option to complete the puzzle where they want (i.e. on the floor) and what puzzle piece they want to start with (i.e. the corner piece). When a task is decided for the child it can be more desirable for the child to complete it when they are given choices within the activity. If an undesirable task needs to be completed, it is essential we meet the child where they are at making it as pleasurable as possible.

Once the two choice interventions were practiced, all four of the children in the study's behaviors decreased. Across-activity choices were linked to the lowest percentages for occurrence of challenging behaviors. According to Rispoli et al. (2013), "By providing within-activity or across-activity choices, teachers may be able to decrease escape maintained behavior and improve student motivation to complete academic demands" (p. 79). This proves that allowing children the ability to make choices increases the child's engagement on task performance while decreasing escape maintained behaviors.

### Arranging Environment

A child with ASD's physical learning environment can play a vital role in allowing that child to thrive and display on-task behaviors. Kern et al. (2002)

found rearranging a child's environment is a common antecedent-based intervention that occurs frequently. This allows the interventionist/parent to alter the child's behavior because what used to be provoking the child is no longer present (Kern et al., 2002). If the environment has a variety of stimuli, such as a disorganized room, bright lights, lack of structure, and distractions on the walls it can make it challenging for children to learn in, complete tasks, listen to directions, and may be eliciting the challenging behaviors. Arranging specific strategies in a child's environment help decrease escape maintained behaviors because it reduces anxiety and frustration. There are multiple physical characteristics that comprise a child's environment. When a child is displaying escape maintained behaviors, interventionists/parents need to re-evaluate what is triggering the behavior. Are there too many distractions on the walls or a specific color that is setting the child off (e.g. too many posters or pictures on the walls taking away the focus of the task)? Does the child's schedule need to be rearranged (e.g. start with a favorite task then proceed to a non-preferred task)? Is there a peer that is heightening the child's behavior to escape (e.g. a peer screaming and child is affected and sensitive to loud noises)? These are all questions to consider when requiring the child to work in the least restrictive environment.

When setting up an environment, it is crucial to arrange the classroom or room at home to decrease specific triggers for the child to engage in interfering behaviors. According to Horner et al. (2002), "Environments are changed to

match the behavioral needs of people in the environments” (p. 425).

Interventionists/parents need to accommodate to the unique needs that our children require to stay focused and engaged. Changes in the environment may work for a while but later require being reassessed and modified. As ASD learners enter into different developmental milestones in their lives, their environment requires rearranging to fit their new needs before the child displays signs of escape.

It is the interventionists/parents responsibility to evaluate what is triggering escape maintained behaviors in the child’s environment. According to Horner et al. (2002), “It is through environmental engineering that problem behavior can be prevented and patterns of problem behavior altered” (p. 425). For example, the child is over stimulated in his/her environment due to multiple distractions on the wall, such as pictures and papers, where the child is to complete his/her task. To reduce the desire to escape the task, the teacher can alter the child’s environment by modifying the physical setting. The teacher can take down all the papers and pictures making the walls bare and then identify the student’s boundary using partitions, furniture, or taping off sections of the floor. In creating these alterations in the child’s environment, the child is able to be seated and attend to the task without displaying escape maintained behaviors. According to Blakeley-Smith et al. (2009), “The redesigned environment may produce higher levels of success for a given skill level, which may contribute to a reduction in subsequent problem behavior” (p. 133). By changing the conditions in the child’s

surroundings, the stimulus is removed and the child can function appropriately in his/her environment. It is also significant to make sure that the environment the child is in does not change abruptly. Too many environmental changes at once may cause extreme anxiety fostering escape maintained behaviors.

Reducing escape maintained behaviors in the child's environment could be resolved by a combination of the individual child's needs as well as accommodations in the child's environment. If the environment is creating a negative atmosphere putting additional stress on the child, then escape maintained behaviors are going to increase. When environmental modifications are created, children's proficiency within the task can increase while decreasing problem behaviors. Once the child feels comfortable and successful in their environment the escape maintained behavior might reduce. According to Blakeley-Smith et al. (2009), "It is possible that environmental redesign reduced task aversiveness, which undermined the need for escape motivated problem behavior" (p. 143). Rearranging environments is a vital component in decreasing escape behaviors.

Interventionists/parents who build physical environments for each child is fundamental to promoting a decrease in challenging behaviors.

According to Strain et al. (1985), (1998) study found the following:

Environments likely to prevent the emergence of problem behaviors include the following features (a) a high level of child engagement, (b) access to preferred activities and rewards, (c) consistent and predictable

system of scheduling (especially systems that incorporate visual schedules), (d) continual access to typical peers, and (e) an immediate and effective system of communication (as cited in Horner et al., 2002, p. 435).

A child who is engaged in the task they are completing is able to stay focused refraining from participating in any interfering behaviors. A child with ASD is kept engaged and motivated in a task when the child gains permission to preferred tasks and then reinforced for their positive behavior. It is also important to maintain a consistent schedule in their environment. This allows the child's predictability of what his/her day, task, or activity will consist of. Visual schedules are an environmental change that can be easy for ASD learners to comprehend. When a child with disabilities has access to typical developing peers, the child observes a role model that acts appropriately in the environment. Lastly, an environmental change that can reduce escape is providing each child with the ability to communicate. Whether the child is verbal or nonverbal both should have a way to communicate his/her wants and needs. This can be difficult for a child who is nonverbal. A few ways to promote communication is by using pictures, a picture exchange communication system, or through technology devices. If the child is supplied with these opportunities for communication the child is able to speak and let the interventionist/parent know what the child is thinking or how they are feeling, which helps reduce the possible outburst of challenging behavior.

## Changing Schedules/Routines

Children with ASD may become anxious when there is a difficulty in comprehending what is expected of them. According to Mesibov, Browder and Kirkland (2002), one proven strategy when assisting children with ASD is creating individualized schedules and predictable routines, which has been successful in decreasing problem behavior. Interventionists/parents should create schedules that children can anticipate and that contain a good balance between adult/teacher directed and student directed activities (Schmit, Alper, Raschke, & Ryndak, 2000). In a classroom setting where a child is transitioning from multiple centers, activities, or to a new location the unfamiliarity may give the child anxiety making it extremely difficult to transition and can lead to challenging behaviors and attempting to escape tasks. Volkmar (1996) states, “Many children labeled with autism tend to perseverate on tasks, to resist requests to change activities, and to engage in stereotypical or tantrum behaviors” (Schmit et al., 2000, Abstract section, para. 4). This creates interfering behaviors and escaping tasks when trying to transition to and from different activities throughout their day. When a child is unaware of a change in an activity many may exhibit challenging behaviors while escaping the current activity because the child was not provided with the adequate time to prepare for the new change in schedule. McCoy (2009) mentions, “Making successful transitions from one activity to another is difficult for many children, especially those with cognitive, language, or behavioral disabilities” (as cited in McCoy et al., 2010, p.



22). Many children with ASD have a combination of these characteristics making transitioning a challenge, so when a change occurs without notice it may upset the child to where escape is identified.

Each child with ASD is very unique in the needs they require. When an individualized schedule is in place, it provides the child the ability to function at a successful rate. According to O'Reilly et al. (2005), "Individualized schedules may act as a form of antecedent intervention to reduce challenging behavior as they may limit the impact of various setting events (e.g., stressful activities, unpredictable transitions) on such behaviors" (p. 305). Its purpose is to meet each individual child's specific demands and needs while transitioning throughout his/her daily schedule in order to possibly reduce challenging behaviors before they emerge. When children with ASD cannot anticipate what will happen next, interfering behaviors may become observable. Schmit et al. (2000) suggests, "One technique is focused on strategies for signaling students prior to transition activities in an effort to forewarn the students and prepare them for impending change" (Abstract section, para. 5). There are multiple strategies to signal and prepare a child a transition and a change is approaching, preventing escape. One strategy is by providing the child with a 3-minute warning. Interventionists/parents can use a visual display using a timer or a visual count down. This prepares the child to finish the task and clean up the area so they will be ready to transition to the next activity. Another way to promote a smooth transition without having the child escape is presenting a picture of where the

child is transitioning or what task they will be completing next. In doing so, this allows the child to visually build a connection and anticipate what follows. Lastly, using a first/then card to visually exhibit first what the child will be doing at that specific moment then where the child will be transitioning (i.e., first puzzle, then recess). First/then cards can also be used with a toy or edible reinforcer (i.e., first work, then car or first sit, then skittle). These strategies can be used alone or combined together contingent to the child's needs for a smooth transition. Transition strategies may help decrease escape maintained behaviors because the interventionist/parent is providing the child with a clear and predictable routine that they can visually see and understand.

A child with ASD may be a visual learner who prefers and functions more successfully when they can understand what comes next in their schedule/day. As stated by Quill (1997) and Spriggs et al. (2007), "Attention to visual materials may serve as a memory aid during transition time to provide more structure than rapidly changing classroom events" (as cited in McCoy et al., 2010, p. 22). This allows children with ASD to concretely see as well as to forewarn the child where they will be transitioning or what activity they will be participating in.

Schmit et al. (2000) study found:

Because children with autism have been known to emit higher rates of appropriate responding when presented with visual stimuli in contrast to auditory stimuli (Volkmar, 1986), one could speculate that cueing systems emphasizing visual signals to elicit a behavior during transition periods

would be superior to cueing systems emphasizing only auditory signals (Abstract section, para. 7).

Visual schedules can be implemented into the child's day displaying what their day is going to consist of (e.g., morning circle, small groups, lunch, recess, art, dismissal). Also, use of visual supports such as first/then cards, picture icons, visual timers, etc. can all signal to the child change is approaching. A child with ASD may take longer to auditorally process spoken instruction. This permits visual cued instructions the aptitude to support the child in a positive way. When the child has a picture schedule it visually expresses how to complete an activity. With this type of support, the child is able to acquire and gain more independence. Visual schedules are found in our day-to-day lives whether we are typically developed or specially designed. It is important to teach children to utilize visual schedules to prevent challenging behaviors from arising.

Interventionists/parents can create visual supports to help aide children when schedules and routines change to reduce escape maintained behaviors. McCoy et al. (2010) found, "Visual supports may improve learning for children who have limitations in processing or attending to transient information or who are challenged to recall information presented verbally" (p. 22). Developing a predictable schedule and routine for a child with ASD may be effective in diminishing escape maintained behaviors and supports them when transitioning from each activity independently. Schmit et al., (2000) results showed when verbal and photographic cues are combined and presented to a child before a

change in schedule/routine occurs, it helps decrease challenging behaviors. Photographic cues can help a child with ASD prepare for what is approaching next in their schedule. When a change occurs that is not usually in the child's daily routine, the child should be prepped of the alteration so they are ready when the change occurs thus not engaging in escape.

It is crucial the child's schedule becomes routine and implemented in the child's life consistently. Day after day the child will eventually learn what to expect and what the following task or activity may be that is approaching. When correct transitions are rewarded, children become motivated to continue to transition successfully (Schmit et al., 2000). An ASD child may need to be constantly reinforced to exhibit appropriate behavior in order to remove or decrease the negative behavior. When a child is continuously reinforced for successfully transitioning from place to place the desire to escape may decline.

In addition to maintaining a consistent routine and schedule, interventionists/parents should alert the child when a transition or change is approaching. This prepares the child ahead of time so they distinguish what to expect. Because transitions can cause some people severe anxiety and confusion it is important for interventionists/parents to implement a variety of strategies to help reduce tension when there is a change in schedule. Once the interventionist/parent is able to observe what relieves the child of anxiety during transition then the child may be able to transition with more success. As mentioned before, interventionists/parents working with an ASD child can design

individual schedules for each child to help specific children to transition effortlessly by providing his/her with a picture or object schedule. This is an influential antecedent-based intervention that supports positive behavior because schedules can be custom toward the child's individual needs (Mesibov et al., 2002). It is essential to custom a child's schedule to accommodate their individual needs because each child's needs are different and unique promoting positive behavior since demands were met based on that specific individual.

### Structuring Time

An important antecedent-based intervention to decrease escape maintained behaviors is structuring appropriate time within the child's activities. Structuring a child's time can be implemented hand-in-hand with providing them with a schedule and routine as mentioned earlier. Most times, a child with ASD does not understand what is expected of them causing interfering behaviors and the desire to escape activities. This unknown creates anxiety because the child is unsure of how to complete the activity, what happens when they are finished with the activity, and where they are to go after the activity is completed. It is important that when generating schedules and routines a child with ASD should not have an abundant amount of wait time between transitions or activities. When too much wait time is allotted the child may veer off task quickly stirring up the desire to escape since unproductive time was administered.

Interventionists/parents may have a child's time structured in a manner

where there are no gaps or wait times allowing the child to maintain focus and attend to the activity. This creates smooth transitions and keeps the child engaged and on-task participating in the activities. For example, some things to think about when structuring time might include: how long an activity will be, if they finish early what will the child do, being organized by having the next activity set up and ready for the child to work on, and forewarning the child what will be next in his/her schedule.

Any child who is provided with an excessive amount of free time may provoke challenging behaviors. A child with ASD may require instant gratification. If the child has completed a task and is waiting on the interventionist/parent for directions or where to go next, the child loses their interest quick. According to Koenig (n.d.), inappropriate behaviors can be generated because of wait times (p.280). A few strategies to help structure time for the child might include: having reinforcers ready for the child after they have completed a task, using visual timers, or playing a song that indicates to the child that they are finished and it is now time to transition to the following activity. During the child's day, visual timers can be a helpful tool in the classroom or at home to define specific times, activities, or transitions. For example, when we cook, we usually use a timer so we can anticipate when the food will be ready. A child with ASD may desire the same anticipation of when they are going to be finished with a task and/or how long the activity will take. Placing a visual timer where the child can see it allows them to visually comprehend how much longer they have to complete a task or

before another task or transition is coming. In using these strategies to help structure time, it may assist in decreasing escape maintained behaviors because the child is now aware of what to expect as well as keeping them on track and engaged in the current activity.

### Highly Preferred Activities/Items

Highly preferred activities and/or items may be valuable when children with ASD partake in challenging behaviors (i.e. escape or avoiding of activities). Children's fascinations make suitable teaching materials. This ABI strategy emphasizes on using children's preferences to increase children's interest, engagement, and motivation in participating in non-preferred activities and daily routines. Children with ASD should always have a preferred activity, task, or item. According to Kodak et al. (2007), it is important to assess "preference for positive versus negative reinforcement under different conditions" (p.37). This is significant for interventionists/parents to discover what these highly preferred activities and items are to use when challenging situations arise.

When ASD learners are escaping tasks, a strategy to use is offering the child an activity or item they are interested in. This helps motivate the child to follow the directions being asked or the demand that has been placed on them. For example, a child will not sit in their chair during lunch. Discover the child's highly preferred food item displaying it on the table then state, "Sit in chair." The goal of this ABI strategy is to distinguish highly preferred items the child loves

and incorporate these items in activities. This may help the child become motivated in participating in the activity instead of engaging in any type of challenging behavior.

When highly preferred items are incorporated into the child's non-preferred activities, it changes the environmental conditions that once caused escape or behaviors in the past. Kodak et al. (2007) gives an example, "providing preferred food reinforcers contingent on compliance might effectively increase compliance, even if problem behavior continues to produce access to a break" (p. 37). It should be noted however; a child's highly preferred item or activity should not be available and used all the time. This way the preferred item will not get boring and become uninteresting to the child, instead the item will continue to hold value to the child. Incorporating preferred items makes activities more meaningful and relevant to children, thus keeping them engaged. Observations allow interventionists/parents to learn about the child's favorite items and interests, their strengths and new developing skills (Grisham-Brown, Hemmeter, & Pretti-Frontczak, 2005). Observing the child for a short period of the day or sending surveys to parents to complete allows the interventionist to create a list of particular items or materials the child enjoys and loves. Some questions to ask are: What makes the child happy and excited? What keeps their attention? What does the child love to do? What don't they like? Keep up-to-date on what the child's preferences and interests are. As they start to mature it changes overtime.



## Pre-activity Interventions

This ABI strategy helps children with ASD to participate and become as independent as they can be during an activity. Interventionists/parents can change the conditions within an activity by giving the child notice of an upcoming activity, using visual schedules that correspond with the activity and letting the child know about any changes. Many learners with ASD have short attention spans, thus it is key to plan ahead and be prepared for the activity or task ahead of time. Setting up activities prior to implementation lessens any wait time for the child and instead promotes engagement in the activity preventing escape and challenging behaviors. An effective way to stay organized and planned when engaging with children who have ASD is to create an activity matrix. By producing an activity matrix interventionists/parents are able to identify the activity the child is to participate in, the target skills that will be expected and observed, and finally the strategy in which will help the child be engaged and participate in the activity.

## Tolerance For Delay

Tolerance for delay (TFD) is a strategy to help with challenging behaviors hypothesized to have the function of escape. “There is evidence that using a tolerance for delay of reinforcement (TFD) intervention can be an effective approach to addressing problem behavior maintained by positive or negative reinforcement” (Chen, McComas, Reichle, & Bergmann, 2015, p.393). TFD is a

signaled delay when giving reinforcement. This process results in gradually delaying reinforcement that is dependent on the child engaging in appropriate behavior.

A delay signal can be verbal such as “wait,” or a visual cue using a visual countdown where children can physically see time is running out. According to Reichle, Johnson, Monn, and Harris (2010), “Delay cues can be either ‘general’ or ‘explicit’” (p. 710). A “general delay cue” does not indicate exactly what the level of engagement needs to be in order to receive release from task; just that relief is coming shortly (Reichle et al., 2010, p. 710). An example of a general delay cue is signaling to the child “almost finished.” The other delay cue is explicit. “Explicit delay cues specify an objectively quantified criterion for continued engagement prior to the finishing task” (Reichle et al., 2010, p. 710). An explicit delay cue is more specific for example, “last one,” or “one minute.” This allows the child to specifically know when to anticipate a task is finishing up. “Reichle et al. (2010), examined the differential effects of general and explicit delay cues in increasing on-task behavior while decreasing escape maintained problem behavior for two preschool children with autism and moderate to severe intellectual delays” (as cited in Chen et al., 2015, p. 394). The aforementioned showed that giving the child explicit delay cues when working on a task can help the child finish the task and decrease escape behaviors. The delayed cue indicates, that depending on the child’s involvement when working on a task without displaying difficult behavior, the child will receive relief after. When the

child is aware of how long his/her task is and when their reinforcement is coming then they are more prone to stay engaged till the end and finish their task without challenging behaviors. For example, when putting pegs in a pegboard the interventionists should give an explicit delay cue of “one more time” or “last one” to signal to the child they are almost finished. This way the child understands that after they are finished putting in their last peg they will be reinforced with an item, activity, or a break will be available. The delay cue needs to be conveyed just before the child reaches engagement to the task and almost immediately followed by a release cue. It is also essential to start a time stimulus that is short, (e.g., 5 minutes and if no escape or challenging behaviors occur then the time can start being increased gradually by 1 minute or so).

TFD increases delays before the child gains access to their preferred item. The child learns they cannot constantly receive their preferred item or activity immediately. According to Chen et al. (2015), “Results showed that an explicit delay cue was more effective for improving task completion and decreasing escape maintained problem behavior of two young children with autism” (p. 394). An example of an explicit delay cue that can be used with the child is stating, “Do one more.” When a concrete number is stated it can help the child understand the exact amount of times necessary to complete the activity instead of a broad direction such as “almost done.”

## CHAPTER THREE

### EVIDENCED-BASED PRACTICES

#### Functional Behavior Assessment

Functional behavior assessment is used when children are displaying inappropriate behaviors that need to be reshaped. According to the National Professional Development Center on ASD, (2014), “Functional behavior assessment (FBA) is considered an evidence-based practice to use with students with ASD” (Pennington & Szakacs, 2014, p. 8). It is a process in which information is collected in order to detect why the behavior is occurring. In using multiple assessments, it increases the accuracy of the outcome. Assessments such as a functional analysis, direct observation, or an indirect assessment can help determine the function of a problem behavior. When developing an FBA, a team of professionals determine the severity of the behavior and if it interferes with academic learning, frequent disruptions, or if they are dangerous to self or others.

It is important to note that when an interventionist/parent is trying to reduce the challenging behavior, an appropriate replacement behavior must be taught in its place. According to Pennington and Szakacs (2014), “The FBA process helps us to identify functionally equivalent (replacement) behavior or behaviors that serve the same function as problem behavior” (p. 8). The

interventionists/parents overall goal should consist of increasing the child's independence in their natural environment (Van Houten et al., 1988).

According to Mueller, Sterling-Turner, and Moore (2005), "FBA incorporating a functional analysis is emerging as an effective model used to assess classroom behavior problems" (p. 425). Mueller et al. (2005) mentions, researchers wanted "to determine the effects of attention on problem behavior that occurs during difficult academic tasks, and to determine whether attention delivered following problem behavior during an escape period, can increase problem behavior" (p. 426). Results from Mueller et al. (2005), indicated children escape when academic demands are placed on them and it creates challenging behaviors. It also showed that when attention was provided to the child when working on a difficult task, the child would escape the task (Mueller et al., 2005). FBA can help professionals determine what the cause of the behavior is and assist in decreasing escape maintained and challenging behaviors in children with ASD.

#### Elapsation of Time Stimulus

If the interventionist/parents provide an excessive amount of wait time before delivering reinforcement to the child, it may trigger challenging behaviors because there is no observable stimulus indicating when reinforcement will be delivered. Research by Butler and Luiselli (2007), supports challenging behaviors can be caused by wait times. For example, reinforcers should be given to the

child directly after task completion. According to Didomenico (2003), most typically developing children have access to a watch, phone, tablet, or clock where they can visually predict how much time they have left to finish a task. “Due to the pervasive deficits present in most children with autism, the use of a clock can be an overwhelming task” (Didomenico, 2003, p. 134). By using the time stimulus such as token economies or visual timers, children “are consistently able to monitor time elapsing as well as obtain access to the reinforcer when the time has expired” (Didomenico, 2003, p. 137). If children can predict and visually see when they will be finished the child’s behaviors decrease.

#### Reinforcement/Token Economy

Another strategy to use is a token economy system. According to Anderson et al. (1996), “A child with autism may also particularly benefit from the use of a token economy in that this population often requires a dense schedule of programmed reinforcement for appropriate behavior” (as cited in Tarbox, Ghezzi, & Wilson, 2006, p. 156). A token economy system allows the child to be encouraged to participate in positive behavior then in return is rewarded with a token that can be used or added to a collection tokens to be exchanged for a reinforcer. A token economy system has several benefits. In using the token system, it keeps the child motivated to continue to complete tasks because they are being reinforced constantly throughout the completion of the task. The

interventionist/parent reinforces the desirable behavior with the token itself. The token economy system can be easily used throughout the child's day. The tokens are easily distributed to the students for a reward when positive behavior is witnessed. All tokens received by the child then can be spent for a greater reward. "Token economy interventions involve delivering small tangibles (e.g., tokens) contingent on the presence or absence of target behaviors and then providing an opportunity to exchange a preset number of these tokens for backup reinforcers" (Carnett et al., 2014, p. 369). Token economy involves giving a token to the student when they possess a positive behavior. When a certain amount of tokens are collected, a positive reinforcer is rewarded to the child.

The perfect incentive for operating the token economy system is modifying it to each child's interest. The token itself should be just as rewarding as the reinforcer the child is working for. Usually, tokens are presumed to stand as an impersonal stimulus that gains reinforcing impact when combined with a different reinforcer. Interventionists/parents can use things that interest each individual child such as, characters from their favorite cartoons, special coins, pictures of trains, etc. whatever enthralls the child as their token because it works as an incentive to increase the value of the token itself (Hackenberg 2009; Matson & Boisjoli 2009).

It is important that once a token is awarded to a child, the token should never be taken away. This creates distrust and confusion for the child. When the target behavior is met, a token should be awarded immediately. If challenging

behaviors occur when using this strategy do not take a token away. Children lose the trust you just built with them which reduces the effect and purpose of the token economy system.

### Non-contingent Escape and Differential Negative Reinforcement of Other Behaviors

One evidence-based practice that has been evaluated to decrease escape maintained behaviors is differential reinforcement of an alternative behavior (DRA). DRA increases the amount of desirable behaviors by reinforcing the child while decreasing the occurrence of challenging behaviors. This creates an opportunity for positive behaviors to occur and for the child to receive reinforcement for displaying the desirable behavior. For proper implementation of DRA interventionists/parents need to reinforce the positive behavior immediately and on a regular basis. Challenging behaviors should not be reinforced. As challenging behaviors decrease the interventionist/parent should decrease the reinforcement of the positive behavior.

Differential reinforcement of other behavior (DRO) involves the interventionist/parent delivering the child's reinforcer after a specific allotted amount of time where no challenging behavior occurs. According to Lomas, Fisher, and Kelley (2010), "The time-based schedule should help to ensure that the highly preferred stimulus is presented on a sufficiently dense schedule to produce immediate reductions in problem behaviors" (p. 432). A baseline should be determined according to the challenging behavior in order to find the



appropriate length of time before a reinforcer is administered. The DRO should be short when a challenging behavior occurs frequently. As the challenging behavior decreases, the length between when the DRO is offered will increase gradually. While implementing DRO, the interventionist/parent should have a timer that signals to the child and interventionist/parent when to deliver the reinforcer. It is important that the reinforcer is only delivered when a challenging behavior is nonexistent within a specific allotted time. Lomas et al. (2010) investigation “tested an alternative hypothesis, namely that the delivery of food contingent on compliance may lessen the aversiveness of demands and lower motivation for escape (i.e., food may act as an abolishing operation and lower the effectiveness of escape as negative reinforcement for problem behavior)” (p. 431). After finding a highly motivating reinforcer, the desire to engage in escape maintained behaviors in children with ASD can decrease.

According to a study completed by Kodak et al. (2003), it demonstrates the significance of differential negative reinforcement of other behavior (DNRO) approaches when decreasing escape-maintained behaviors transpiring when demands are placed on the child. It serves as a reinforcer for the child when the child is given a few seconds break from a task. A fixed-time schedule that is gradually thinned also may decrease escape maintained behaviors. According to Butler and Luiselli (2007), this strategy is described as providing the child with a task to complete but allowing time-fixed non-contingent escape, the child taking a break, and then going back to complete the task. This allows the child to tolerate

the task and decrease any escape behaviors.

Gradually the time between the breaks would increase as the child works on a task for a lengthier time period before receiving his/her next break. When implementing DNRO, the child must maintain positive behavior for an assigned time period to receive a short break as reinforcement. The allotted amount of time would need to restart if the challenging behavior occurs before the time is completed. According to Kodak et al. (2003) study, it “found both DNRO and NCE to be effective treatments for increasing compliance and decreasing problem behavior” (p. 382). Research by Butler and Luiselli (2007), revealed high-demand conditions modified by developing non-contingent escape while scaffolding demands can effectively reduce the challenging and escape maintained behaviors.

## CHAPTER FOUR

### RESULTS

#### Findings

Many studies were reviewed and analyzed to determine what strategies have been successful in decreasing challenging behaviors, especially escape behaviors, in children with ASD. Interventionists/parents can decrease challenging behaviors such as escape by implementing various strategies into the child's daily life. ABI strategies, such as: providing choices, highly preferred activities/items, pre-activity interventions; and evidence-based practices, such as: non-contingent escape and differential negative reinforcement of other behaviors, functional behavior assessment and elapsation of time stimulus are proven to be effective. As outlined previously, the antecedent-based interventions that have data to prove they can be successful in decreasing escape maintained behaviors include the following: modifying the complexity of task requirements to fit the ability of the child, task variation such as embedding novel tasks into students preferred activities or mastered tasks, decreasing instruction time keeping them short and concise, providing each child with choices throughout their day, arranging the child's environment to keep environmental stimuli to a minimum, introducing simple changes into the child's routine or schedule, structuring time for each individual so they are aware of the time they have to complete activities/tasks, incorporating highly preferred activities/items into the child's

curriculum, and pre-activity interventions. All of these strategies have been researched to use for children with ASD and to successfully decrease challenging behaviors. Antecedent-based interventions help prevent what may be triggering the child's behavior. Other evidenced-based strategies that are scientifically proven to be effective among children with ASD include: antecedent based intervention, functional behavior assessment, tolerance for delay, elapsation of a time stimulus, and token economy systems/reinforcements, and non-contingent escape and differential negative reinforcement of other behaviors.

There are advantages among implementing antecedent-based strategies. One advantage is there are multiple strategies to attempt when addressing an escape-maintained behavior. When working with an ASD child, one knows a strategy may be successful one day but not the other. Interventionist/parents should be familiar with multiple strategies in the event that any one strategy may not be successful and another strategy can be applied. Another advantage to using antecedent-based strategies is the interventionist/parent is able to apply one or more of these strategies, which helps minimize the likelihood of the behavior from occurring, decreasing the behaviors existence.

Interventionists/parents need to take into consideration that every child with ASD has different needs and react to strategies in a different manner. In using these strategies, a trial and error approach should be considered. What is successful with one child with ASD might not be successful for another.

After reviewing several articles, most strategies researched are evidence-based practices (EBP). This means there is scientific research to support these specific practices showing they are effective and are successful to use with children with ASD. Most studies used task analysis to take data and chart their research. All strategies discussed are focused on children with ASD.

## CHAPTER FIVE

### DISCUSSION

#### Implications

The identification of antecedent-based strategies and evidenced-based practices has evidence of efficacy when implementing these strategies for children with ASD. There are various approaches in which an interventionist/parent can implement these strategies into the child's routine and schedule to decrease challenging escape maintained behaviors. In this study, multiple strategies were researched and proven to work successfully for children with ASD. Whether the child is high functioning or more severe, most strategies can be used and modified to the child's ability level. It is imperative for interventionists/parents to be aware that every child with ASD displays unique characteristics therefore; some strategies may not benefit every child because each child is affected by ASD in a different manner. The interventionist/parent needs to observe the child's cognitive level to deem which strategy is most appropriate. Also, data should be taken over a few consecutive weeks to determine what the antecedent is to the behavior and what is an appropriate consequence following the behavior. When this is established, interventionists/parents can decide what strategy will be appropriate and effective in diminishing escape behaviors and will answer why the child is seeking these types of behaviors. This means some strategies may not be appropriate, some

may need to be used individually, or some may even be combined with others, which can lead to decreasing challenging and escape maintained behaviors.

Although, further effort is vital to gain a more comprehensive realization of what is causing the behaviors to occur. The research indicates that using the strategies such as; a token economy systems/reinforcements, allowing students to make choices, decreasing the difficulty of task demands, embedding new tasks within those formerly mastered, tolerance of delay, functional behavior assessment, reducing time spent in instruction, and elapsation of time stimulus and using DNRO or NCE may help decrease escape maintained behaviors in children with ASD. Always remember when trying to decrease a challenging behavior such as escape, another appropriate behavior should replace it. Another study should be conducted to discover what the purpose of the behavior is. It would be beneficial to determine the behaviors function to assist in appropriately choosing the best strategy to decrease escape maintained behaviors. It would also be beneficial to research replacement behaviors for children with ASD who are displaying escape maintained behaviors. Lastly, to narrow down what strategies would be most appropriate; more research should be explored in being specific with what strategies are more effective within different age ranges of children diagnosed with ASD.

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