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Sensory Integration and Negative Behaviors

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Sensory Integration and Negative Behaviors

By

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Abstract

Sensory integration is not abundant in the research on therapies and education. Due to the fact that there is so little information on sensory integration correlating with behaviors of adolescent students with severe emotional, behavioral, and intellectual disability, I decided to study just that. This study was done at a school in New York State that is primarily a school for students with disabilities severe enough that their local school districts cannot provide for them. There were a group of eight participants ranging from fifteen to eighteen that all had behavioral episodes almost daily. When the participants exhibiting warning signs for a negative behavior staff would administer sensory integration in the form of deep pressure, heavy work, compression vest, or body sock to the participant to observe if the sensory integration deescalated the negative behavior. During this study the eight students had a total of 140 negative behaviors. Out of the 140 negative behaviors 100 of these behaviors were deescalated with a form of sensory integration. Out of the 100 deescalating behaviors 67 of the times deep pressure was administered; the remaining 33 positive responses were in the form of other sensory integration. It was also noted that 78 times out of the 100 positive responses, sensory integration was administered to the participant in less than five seconds of their warning signs.

Sensory Integration Correlates with Changes in Negative Behaviors

The topic I have chosen to research for my literature review is the effect of sensory integration therapy on students with behavioral issues. This topic is very significant to study because our senses control so many of our actions as human beings.

If these senses are not functioning properly then our responses to daily events will not be appropriate. If one's senses are malfunctioning sensory integration can help organize, arose, and alert one's body to react in its own environment appropriately (Ayres, 1989).

In so many school environments there are set guidelines and structures as to what is appropriate school behavior and what is not. The students that don't fit the mold of these appropriate behaviors are often excluded from public schools and put into schools with other students that have similar behaviors as they do. Conventionally, students with learning disabilities and challenging behaviors are medicated and often physically restrained (Blairs & Slater, 2007). These students are being given basic education due to time spent on controlling their negative behaviors and not given the opportunity to succeed and excel in the education system. The negative behaviors that some students engage in are preventing them from learning in an inclusive setting and these students are moved into more restrictive schools, when that is the opposite direction the school systems for students with disabilities should be going. Sensory integration can assist in decreasing aggressive, high anxiety, agitated behaviors and increase focus and engagement for students that are lacking in sensory input (Thompson, 2011). With a change in these behaviors students could potentially be readmitted or initially admitted into an inclusive school environment.

The areas covered in this paper will be research that supports and argues against deep pressure and sensory diets being an effective calming strategy. Different experiments have been done on different groups of people with disabilities, all revolving around sensory diets as a calming therapy. This paper will also go into an experiment

that I will be conducting on deep pressure touch on students with behavior, emotional and learning disabilities during escalated situations.

Theoretical Framework

The theory of sensory integration was introduced and intensively studied by Dr. Jean Ayres back in the 1960s. Back when sensory integration was still in its early stages of construction it was defined as,

> …the neurological process that organizes sensation from one's own body and from the environment that makes it possible to use the body effectively within the environment. The spatial and temporal aspects of inputs from different sensory modalities are interpreted, associated and unified. Sensory integration is information processing. (Kinnealey & Miller, 1993, p. 475)

In other words, sensory integration is using the appropriate sensory input related to the child's neurological needs to spark a response from their senses. The purpose of sensory integration is to create stimulation and attention to the environment that is most advantageous for learning (Smith, Press, Koenig &Kinnealey, 2005). When our senses are not functioning correctly, our body is not able to organize itself, and if it cannot organize itself then it does not react and respond to situations appropriately; this is often seen and labeled as negative behaviors.

Sensory integration needs to be studied and integrated into special education programs because many people who engage in challenging behaviors continue to be physically restrained and excluded from typical students and the education that they are receiving (Blairs& Slater, 2007). The desired outcome is not to exclude students, but to

include while giving them the best, most appropriate education. Sensory integration is also a non-restrictive approach, and can be very low tech and low cost, so it is realistic for all school settings.

Applying sensory integration therapy to students with disabilities that have sensory dysfunction problems can change a student's negative behavior, whether that is aggressive, disruptive, withdrawn, or anxious behaviors, so that they can succeed and be accepted into traditional classroom settings. Sensory integration uses planned, illicit sensory input that relates specifically to each student's physical and mental needs. In response the senses are stimulated, and the negative behavior can in turn change into a positive behavior (Smith et al., 2005). Using planned sensory input allows physical changes to occur in the child's brain changing these negative behaviors. Thompson (2011) says, "Providing students with opportunities for sensory experiences enhances the ability of the central nervous system to process and integrate sensory information" (p. 202).

In education today there is a major push for inclusive education classrooms. Degan (2005) says, "The shift in the educational placement for students with disabilities, with emphasis on inclusion, is based on the premise that all students have the right to be members of the school community and that no student should be excluded" (p. 192). This statement shares what many people today are realizing; students with disabilities should not be pushed into segregated schools, or classrooms, but should be able to stay in the traditional classroom and learn with their peers.

The issue that rises with inclusive education is the differing behaviors that are seen as negative behaviors from students with disabilities in a general education

classroom. Ballard (1999) says, “Inclusion is about valuing diversity rather than a focus on assimilation” (p. 192). In other words, the idea of inclusion is to preserve the diversity inclusion would bring into the classroom and not try to change the students with disabilities. Many questions arise about inclusive education settings because there are concerns that students without disabilities will not be able to learn in an environment that is disruptive from students that have disabilities and negative behaviors for a general education classroom. In an inclusive classroom sensory integration theory can be used to help students with negative behaviors succeed and be accepted in a general education classroom.

Literature Review

Sensory integration has a significant correlation to altering negative behaviors in students with disabilities. Sensory integration therapy can be developed into the daily routines of students who need sensory input to help organize their senses and ultimately decrease their negative behaviors due to malfunctioning senses. Sensory integration is not restrictive to students and with further research, implementation and analysis, can possibly end the issue of excluding students with special needs from the rest of their peers because they have disruptive and inappropriate behaviors for the current acceptable school environments.

The theory of sensory integration examines the way the human brain works and how sensory input can alter and improve problem behaviors, or a person’s ability to function (Kinnealey& Miller, 1993). Throughout Ayres’s study she determined, “that many of the behavioral and learning problems manifested by her clients had a biological basis. She hypothesized that through therapeutic input designed to modify the

neurobiological basis of behavior, function improvement could result" (Kinnealey& Miller, 1993, p. 475). As Ayres's approach to sensory integration began to grow, it also began to spread into schools through occupational therapy programs. Schaaf (2005) says, "The goal of intervention [occupational therapy] is to improve the ability to process and integrate sensory information and to provide a basis for improved independence and participation" (p. 143). Within these programs sensory integration can be a variety of things depending on the individual students needs. Some sensory integration can be: weighted vests or bags, putty that is used for therapeutic needs, deep pressure, swing, compression vest, or a variety of more available options.

It wasn't until the mid-1980s that the group Sensory Integration International (SII) took control over Ayres's study and expanded it into categories studying treatment and education. Although Ayres developed sensory integration into occupational therapy practices it is still evolving in many ways within schools and other researchers are expanding on occupational therapy. Schaaf (2005) says, "Occupational therapy with sensory integration approach is designed to guide intervention for children who have significant difficulty processing information, which restricts participation in daily life activities" (p. 143). Meaning, sensory integration will be intertwined into occupational therapy and delivered to students that are in need of sensory input.

Sensory integration was created to treat children with learning disabilities, but since then it has expanded and is being applied to children and adults with autism, mental retardation, and other severe handicaps (Smith et al., 2005). It is believed that there is a relationship between sensory dysfunction and negative behaviors which coincide with the inability to interact appropriately in the education system. This hypothesis of providing a

person with the appropriate amount of sensory input to improve their functional ability and alter their negative behavior is still being researched and tested today, but many studies have positive findings on this hypothesis.

Although there are many studies that have positive findings that support sensory integrations effect on negative behaviors, most are followed up with some concerns about their method and experiment. For example a study on the effects of a weighted vest on problem behaviors found a correlation between positive behaviors and the weighted vest, but still had concerns stating, "most of the research that indicated weighted vests as having an effect on problem behavior appear to be used on data acquired through the use of experimental designs that do not reliably control for confounding variables" (Quigley, Peterson, Frieder & Peterson, 2011, p.531). Both the Ayres and Blairs studies seemed to have found positive effects of sensory integration also state that there are other variables that could have affected the outcome.

Sensory Integration and Anxiety

The first theme is that the effects of sensory integration are beneficial for students with high anxiety disabilities and with their calming process. It seems to decrease negative behaviors for students with disabilities; also sensory integration is shown to have the ability to increase focus of students with self-stimulating behaviors and attention disabilities.

There have been claims of considerable benefits from the use of deep pressure touch on children and adults with high anxiety disorders. Blairs (2007) supports the above statement, "With people who have sensory abnormalities or severe anxiety, there have been accounts of the use of more specific therapeutic interventions…in forms of

touch" (p.215). Deep pressure can come in many forms. Equipment can be used to squeeze students, mats, bean bags, compression vests, or body socks. It can also be as simple as deep pressure touch which is simply squeezing the recipient's arms, legs, head, shoulders and back between your two hands. Quigley (2011) did a study using deep pressure through sensory integration technology; he claimed that this technology, such as weighted vest is intended to stimulate the proprioceptive and tactile system of students. This deep pressure allows the student to calm their body and their senses to reorganize themselves.

Studies on deep pressure touch have been done on people with autism, attention deficit hyperactive disorder (ADHD), and students with severe learning disabilities. Deep pressure has a calming effect on its recipients and leads to a decrease in pulse rate and breathing, which overall will relax and calm someone with high anxiety (Blairs& Slater, 2007). When a child has high anxiety they are not calm and they often feel unsafe and nervous. In a classroom this student may have aggressive behaviors, or are unable to focus because their senses are not working properly and they cannot react appropriately to their environment.

Sensory Integration and Self-Stimulation

The next theme is that students that need severe sensory input are students that have developmental disabilities and engage in self-stimulating and self-injurious behaviors. Sensory integration in students with self-injurious behaviors was studied by Lemke as an extension off of Ayres's research. Lemke discovered that sensory stimulation decreased engagement in self-injurious behaviors (Smith et al., 2005). Self-stimulating behavior is "repetitive bodily movement which serves no apparent purpose in

the external environment" (Harris &Wolchick, 1979, p. 187). Self-injurious behavior is classified as a self-stimulating behavior as well. These behaviors interfere with the student's ability to participate and become engaged in the classroom environment. Students will lose the ability to communicate and interact with their classmates and teachers if they are continuously engaged in self-stimulating, or self-injurious behaviors (Smith et al., 2005). Not only do self-injurious behaviors prevent the student from learning, it also is a very big health risk to the student and significant damage can be done to the tissue where the student is continuously hitting themselves (Smith et al., 2005).

Students with self-stimulating and self-injurious behaviors are seeking out sensory input that they are not receiving elsewhere. The reason people with disabilities engage in self-stimulating or self-injurious behaviors are because, "these behaviors are inherently reinforcing by providing tactile, proprioceptive, and sensory stimulation to an extent, which is not achieved through conventional adaptive behavior"(Smith et al., 2005, p. 419). These behaviors are helping the student add to the sensory input they are lacking to balance their senses and organize their bodies. Smith (2005) studied seven subjects with severe mental disabilities. Each person was given a test based on certain sensory needs and related behaviors. If certain behaviors were observed from these selected candidates, then a continuation on with sensory integration therapy would be applied. This study allowed the researchers to select the appropriate type of sensory input for each individual by directly observing them. The results from the study show that sensory integration intervention did reduce the amount of self-stimulating and self-injurious behaviors in the children compared to students with severe mental disabilities that did not receive sensory integration. Quigley (2011) had different results when studying a group

of people with a variety of behaviors, but all including some form of self-injurious behavior. He focused on three people with disabilities and observed their behaviors while wearing a weighted vest at zero percent, five percent, and 10 percent of their body weight. All three of the participants still had elevated behaviors even with use of the weighted vest during all percentages of their body weight. Meaning there was no significant difference between wearing the weighted vest and not wearing it for these participants.

Sensory integration therapy can assist in contributing sensory input and replace the stimulation that is gained through harmful self-injurious behavior. In other words, integrating sensory into a student through controlled therapies can replace the negative behavior of self-injury because they will be receiving the same sensory, just in a different more appropriate way.

Research Stance

After reviewing the literature, sensory integration worked on both students with behaviors that were due to anxiety, and students with self-stimulating and self-injurious behaviors. The appropriate amount of sensory input was used for each individual student to calm and organize their bodies so they didn't need to engage in negative behaviors. I am theorizing that sensory integration therapy will decrease negative behaviors, such as aggressions and noncompliant behaviors in students with disabilities that have severe sensory processing needs. By providing sensory stimulation in forms of deep pressure, heavy work, weighted bags, textile bins, and swing programs, then children with disabilities will have their sensory needs met, so they will feel satisfied, safe, and

organized therefore decreasing the need for negative behaviors to communicate their need for that.

Conclusion

The literature on sensory integration shows how important and useful sensory integration therapy can be to students that need more sensory stimulation than their bodies are allowing them. As presented by the founder of sensory integration Ayres, this specific technique can completely alter a student's behavior allowing them to be much more successful in an academic setting.

Teachers are often the first people in an academic setting to realize a student may need additional support or have a disability because they spend the most time with the students. Teachers need to meet with their team in their school setting and spread the word about sensory integration and what they have researched. They can talk with the occupational therapist and see if this approach would be appropriate for certain students. Even without the occupational therapists approval teachers can do things in their classrooms for students if needed. Teachers are always observing their students; if a student seems to need a fidget toy, or a strip of Velcro on their desk to play with, or a medicine ball to bounce on then the teacher should supply these items for their students and monitor their effectiveness. These are all examples of sensory items that may work for some students and help control their behaviors. If something more intensive is needed then an occupational therapist should be consulted.

With the use of sensory integration, students with disabilities relating to sensory dysfunction are able to organize their senses and react in an appropriate way for the environment they are in. Sensory integration therapy will not only help students with

how they physically feel, but I believe with enough research has the potential to reduce medication use and physical restraints with this form of intervention. Sensory integration is the least restrictive intervention that can be used to help students control their negative behavior, and should be utilized more than it is. Sensory integration therapy is more time consuming than medicating a child, or physically restraining them to control their bodies, but in the long run sensory integration is, as New York State law requires, the least restrictive intervention that can help a student help regain control of their bodies.

Methodology

Context

This study took place in a suburban school district in upstate New York. This school is primarily for students with severe emotional, behavioral, physical and intellectual disabilities. Many of the students in this school have multiple disabilities that their local school districts cannot support in a public special education setting, therefore they are sent from their districts to this school only for students with special needs. These students come from many school districts to receive their education from preschool until they graduate. Although it is not common, some students make enough improvements in all areas of need, to be placed back into a special education program at their local school districts.

This school was picked for this particular study for a few reasons. The first reason was because I have a personal connection to the school. The second reason because I have this personal connection, I know about some of the students that attend the school and they meet the criteria of characteristics that I needed for this particular study. There are also enough of the particular participants that I need for this study in this

school, so I can have a larger pool in the same school environment to keep that consistent variable with the setting and environment.

Participants

The participants for this study range from having classified mental retardation, autism, post-traumatic stress disorder along with behavioral issues. The selected participants all have behavioral episodes on a weekly basis at minimum. The students I decided to select range from ages fifteen through eighteen; they are both male and female participants and are all of different races.

Specifically, the pool of participants consists of four males and four females. The males' ages range from sixteen to eighteen and the females range from fifteen to seventeen. Three of the males are African America and one is Caucasian. One girl is African American and the other three are Caucasian. All of the participants have multiple disabilities and severe behavior disorders. All participants except two have required an approved physical restraint at least once this school year because their behaviors escalated to an unsafe level. All of the boys are nonverbal and three out of the four girls are nonverbal. Two of the eight participants have been identified as having a sensory processing disorder; the other six participants have not been identified as having that disorder, but staff currently implement deep pressure inconsistently throughout their school day.

Research Stance

The interest in this study came from my work experience in a school with students that are emotionally and behaviorally disabled. I am a Behavior Therapist and am exposed to many positive and negative behaviors throughout the school day. I focus on

modifying these behaviors from negative to positive, or at least to decrease the severity of the behavior to a manageable level while working on coping skills with the students. I have had one student that was new to the school in the summer of 2012. I was at a loss about the student's behavior and function of his behavior. He was very impulsive and had extremely high anxiety along with many trust issues. His mother died less than a year before, his father and sister stopped visiting him, he moved into a new group home and school. Everything in his life changed therefore he did not trust anyone. I didn't know what to do for him to make him comply, come to school, and eventually become an active member of his school environment. It was two weeks into the school year and he had yet to get off of his van and enter school. I didn't know what to do, none of the strategies I knew were working for this particular individual. I decided to sit on the van with him for about an hour each day conversing and during this time I gave him deep pressure on his arms, legs, shoulders, back and head. He responded very well to this asking in an utterance for more and tapping his head where he wanted it. When the pressure was applied he would close his eyes and his whole body would start to relax; eventually he began to come into school. I began to use the concept of deep pressure as a motivator for the student to persuade him into complying with the scheduled task once he was in school. As a result of this experience I thought it would be interesting to study something relating to this particular moment I had with one of my students for my Capstone as I work to finish my master's degree in Special Education.

During this study I was both an observer and a participant collecting the data for this study. I created data sheets for each student that I was collecting data on. These sheets were taped to the walls near each student's area in the classroom, so they were

always available to staff. All classroom staff were trained to properly give deep pressure. I had a meeting with all the staff where they received a brief explanation as to when to administer deep pressure during escalated situations, what the data sheets implied and the information that I was looking to collect. I did not give them any more information on the study because I didn't want them to subconsciously skew the data. At the end of each week the classroom staff turned in the data sheets for me to analyze and graph.

Method

The purpose of this study was to examine if sensory integration can deescalate a situation when a student began to exhibit warning signs that lead to engaging in negative behavior, specifically aggression. The behavior does not have to change from negative to positive, but the negative behavior needs to decrease while deep pressure is being given. For example an aggressive behavior that turns from aggression to noncompliance, would be looked at as a decrease in the negative behavior as long as the student was able to engage in a demand task before aggressing again.

When this study began I started out as both an observer and a hands on participant of this study. I would spend time in the different classrooms where my participants were located. If a participant's behavior began to escalate while I was in the classroom, I would assist with one or two other staff in giving deep pressure to the student. A lot of the time the student's behavior would begin to escalate quickly, so one staff was not enough to safely control the situation as well as administer the sensory input in the form of deep pressure. If I was not in the classroom, the staff working with that student would administer the deep pressure and record the information needed on the data sheet provided.

All of the students selected for this study exhibit warning signs before their behaviors fully escalate; each students warning signs are specifically written in their Behavior Intervention Plan, so all staff are aware of what these signs look like. When a student began to exhibit warning signs the staff would immediately go to their side and start to administer deep pressure on their arms, shoulders, and head. Individual students would respond better to certain body parts. With certain students their behavior would escalate quickly. In this case multiple staff would be needed for the student. One or two staff would be needed for arm control while the other staff administered the pressure over the student's upper body. If the behavior began to escalate to an unsafe situation, then the staff would decide if an intervention other than the deep pressure would need to be used. If I was not in the room and the behavior could be managed without an intervention for a brief amount of time, staff would call me to come make that decision. If deep pressure was interrupted due to an intervention this would be recorded as well. If the deep pressure was positively received by the student, or no emergency intervention was needed then the pressure would continue, but begin to be faded to ensure the student was calm. When the student regained control they would be redirected back to their scheduled activity prior to the behavior. The student would need to complete one demand task before aggressing again for the deep pressure to be counted as a positive response from the student. If at any time the student verbalizes that they do not want pressure, or if they are non-verbal and indicate they are uncomfortable or are pulling away from the pressure, it would then be ended immediately and a negative response to the deep pressure would be recorded.

Data Collection

There were only two ways in this study that data was collected; either directly or indirectly. Direct data collection happened when I was present at the time the deep pressure was administered. If I was not in the classroom when the deep pressure was administered then I received the data on the data sheets every Friday after the classroom staff tallied up the information on the data sheets and turned them into me to be analyzed and graphed. Upon collecting the data on Fridays, I would also frequent the five classrooms I collected data from to look over the data on a daily basis. The reasoning for this was if there was something I didn't understand I wanted the staff to clarify the information while it was still recent, to better validate the information. Once all data was collected from March 4, 2013 through March 29, 2013 I graphed all data per individual child examining their behavior in response to the sensory integration and looking for commonalities between the students, their behaviors and their responses to the sensory integration.

Findings and Discussion

Introduction

Before starting this study I decided to start basic in the study of sensory integration deescalating negative behaviors. I decided this because there is not a lot of research published that supports or does not support sensory integration correlating with decreasing negative behaviors of students with severe behavioral disabilities. I thought that if I start basic and look for commonalities among a general group of students with severe behavioral and emotional disabilities I could then eventually expand my research into commonalities between different disabilities, ages or gender to look for more specific correlations. Without looking into specific disabilities, such as autism or other

health impairments, I found commonalities with the length of aggression before the sensory integration was administers correlating with the success of sensory integration decreasing negative aggressive behavior.

Positive Response to Sensory Integration

The most crucial aspect to sensory integration being successful in this study was the response time to administering the sensory input. If a student expressed warning signs and sensory integration was administer within five seconds or less of the behavior data shows that the behaviors was more apt to decrease to a lesser behavior than if administered at a longer period. Out of the 140 behavioral episodes during this study, 100 of the responses towards sensory integration were positive responses and 78 of these responses were when sensory was given to the student within five seconds or less (see Appendix A).

Zero Response to Sensory Integration

Out of the 140 behavioral episodes during this study, 100 of them were positive responses to sensory integration, therefore during 40 behavioral episodes the student that engaged in the negative behavior had no response to the sensory integration and their behavior did not deescalate. During this time deep pressure was administered to the students for a quick response. If deep pressure did not work then a weighted backpack, body sock, compression or weighted vest were attempted depending on the student, their state of aggressive behavior and their liking of these certain items. If a student's behavior was too escalated and aggressive these items would be available and offered to the student verbally. There were zero times during this study that a student selected a

sensory item while they were escalated past the point of deep pressure working to calm the student down.

Deep Pressure Compared to Other Sensory Integration

Another commonality I found while analyzing the data were the comparisons between deep pressure and other forms of sensory integration relating to the de-escalation of negative behaviors. Out of 100 positive responses to sensory integration 12 of these de-escalation responses were associated with the use of a compression vest. A body sock was used to deescalate negative behaviors three out of the 100 times. A weighted backpack was only chosen by one student, but deescalated her behaviors 18 times during this study. Deep pressure was the last sensory integration strategy used and that deescalated negative behaviors 67 of the 100 times when there were a positive response to sensory integration. There seems to be a significant difference between deep pressure and other forms of sensory integration. This could be for many reasons. First, deep pressure in this study was more staff assisted calming for the student. The staff, although not holding the student's arms down, was able to control the student's body more so that giving the student a weighted backpack and letting them walk around to calm themselves. Secondly, deep pressure required a staff or multiple staff to be around the student. A lot of times behaviors occur when a student feels unsafe, or that they do not have a controlled environment. With staff being so close to a student to administer the deep pressure, that may have given the student the feeling of being safe and having a controlled environment.

Conclusion

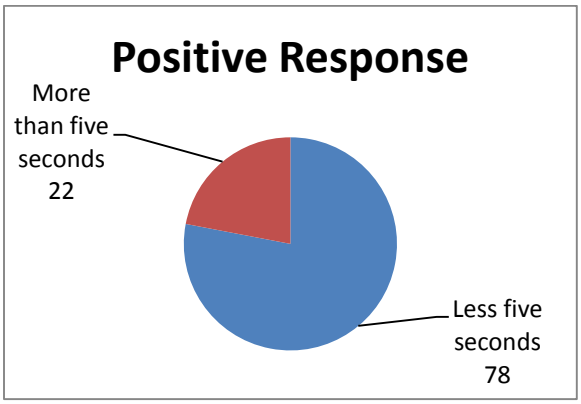
After analyzing the data collected I do think that sensory integration has a positive effect on students that need sensory input. Specifically, I believe deep pressure has a significant impact on students with disabilities that need sensory integration in their daily routine. I think within this small study it is significant that 100 times out of the 140 behavioral episodes there was a positive response to sensory integration. It seemed that most students were able to move on once their behavior was finished and engage appropriately in at least on demand task after the sensory integration was given. Much like Smith et al. (2005) stated, sensory integration is to create stimulation increasing attention to the environment that is most advantageous for learning. I found very similar correlations to sensory integration and stimulation as students were able to move on in their educational setting after a behavior.

I would like to expand this study using a larger pool of students with behavioral, emotional and intellectual disabilities to see what the results would be in response to sensory integration. I think there were multiple gaps within this study that could have skewed some of the data collected. First off, there were multiple staff within a classroom implementing sensory input to students that needed it. Many of the students have preferred and less preferred staff, which I believe would affect the de-escalation in negative behaviors. Next, I think it is important to examine the function of student behavior. If a student was attention seeking and sensory integration was given to the student there could be two reasons that the behavior deescalates; it could be either that the student needed sensory input, or that the student received the attention they were looking for. Lastly, some staff would motivate students and converse with them while administering sensory integration. I would like to have a study where there was no

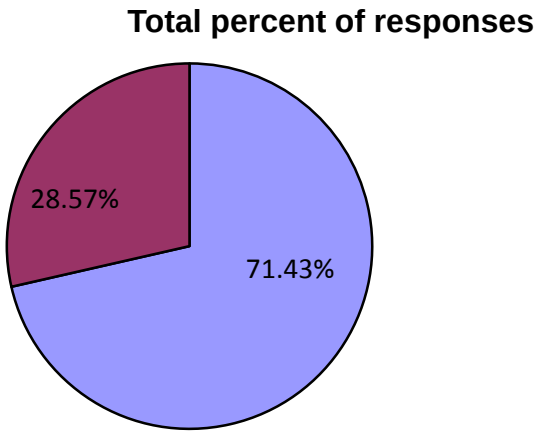
communication with the students during a behavior to see if the sensory integration is the actual reason for de-escalation of a negative behavior or if it was the motivation to get through their schedule.

This study was very broad with the amount of possible sensory integration interventions that were available for the students. If I were to expand on this study I would choose to focus more on the effect of deep pressure on students with a specific disability. I think this study has shown that deep pressure has a positive impact on deescalating behaviors for students that need sensory input, therefore I would choose to expand on that research with a larger and more specific group of students.

Appendix



Appendix A shows that out of all the positive responses 78% of the positive responses had Sensory integration administered in five seconds or less.



This graph shows the total percent of behaviors and their responses. The purple is the percent of time the participants responded positively to sensory integration. The dark purple is the percent of participants that did not respond to sensory integration at all.

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