

Floatation and Autism

A case study evaluating floating for Autism

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Background

Autism spectrum disorder (“ASD”) is a complex developmental disability which tends to appear during early childhood and affect a person’s ability to communicate and interact with others.

ASD is defined by a certain set of behaviors characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication. There are often hypersensitivities to lights, sounds and tastes. Anxiety and depression, eating disorders, seizures and gastrointestinal problems can also be involved. Many with Autism have sleep problems.

A combination of “genetic and environmental factors” have been linked to the development of autism and there are common traits but ASD can vary significantly. With many subtypes, each individual has unique strengths and challenges. Therapy typically focuses on cognitive behavioral therapy, social skills training, physical and occupational therapy, as well as psychoactive medicines.

Autism affects the whole family in terms of demands and financial burdens for treatment. This is especially true for mothers of children with ASD who tend to serve as the child’s case manager and advocate. Treatment and monitoring of life and social skills becomes even more complicated after the child has reached adulthood.

There is an ever increasing demand for new and effective treatments that address the complexities of a lifetime of ASD and the collateral effects upon the family.

Previous floatation therapy case studies have demonstrated improvements to states of stress, anxiety and sleep which overlaps and impacts many other areas. Floatation therapy may well be a worthy consideration for those involved in the world of ASD.

Objective

The objective of this case study is to observe the effects of nine (9) weeks of floatation therapy upon the expression of various common traits of Autism Spectrum Disorder.

A second objective is to see how long any perceived positive effects last, up to one month after the study, with no further intervention.

Method

This is a single subject study, with one 13 year-old male who has been clinically diagnosed with Autism. He and his mother conveyed a history of his ASD traits, which were formulated into baseline, daily, and follow-up surveys.

The intervention for this case study involved “floating” in a 9’ long x 5’ wide fiberglass tank with a hinged lid, shaped like a large egg and filled with 175 gallons (10” deep) of a salt solution. This solution contains 1000 pounds of medical grade Epsom salt, or magnesium sulfate (MgSO₄) and is maintained at skin temperature (approximately 94°F). The tank is within a private room containing a shower. To “float” the individual disrobes, showers, inserts earplugs, turns off the overhead room light, then climbs inside the tank which has an internal light and music controls. The individual closes the float tank lid and then transitions onto a supine (face up) position and begins to float effortlessly.

The study lasted nine (9) weeks in duration where this participant floated once weekly for nine (9) weeks for a total of nine (9) float sessions.

A baseline survey was done prior to the first float and a daily subjective survey was completed (with the help of his mother) using a numeric scale on a 0-10 continuum with descriptors. The understanding of the scoring system was 0=none/no issue/no longer applicable and 10=worst, terrible, extremely problematic. There was a follow-up survey completed after two (2) weeks and one (1) month after the study was complete.

There was minimal interaction with the participant during the course of the study, other than keeping him on track with the surveys and making sure there were no questions before and after floating. There was no cost for the participant and there was no financial gain from The Float Zone, where the case study took place.

There are no other disclosures.

Results

Over 50 daily surveys were completed in a 63 day period, allowing for a significant data set. Of these surveys, week 9 (the last week of the study) was compared to the baseline score of the following traits that were deemed part of his ASD.

Stress and Anxiety Level (see graph)

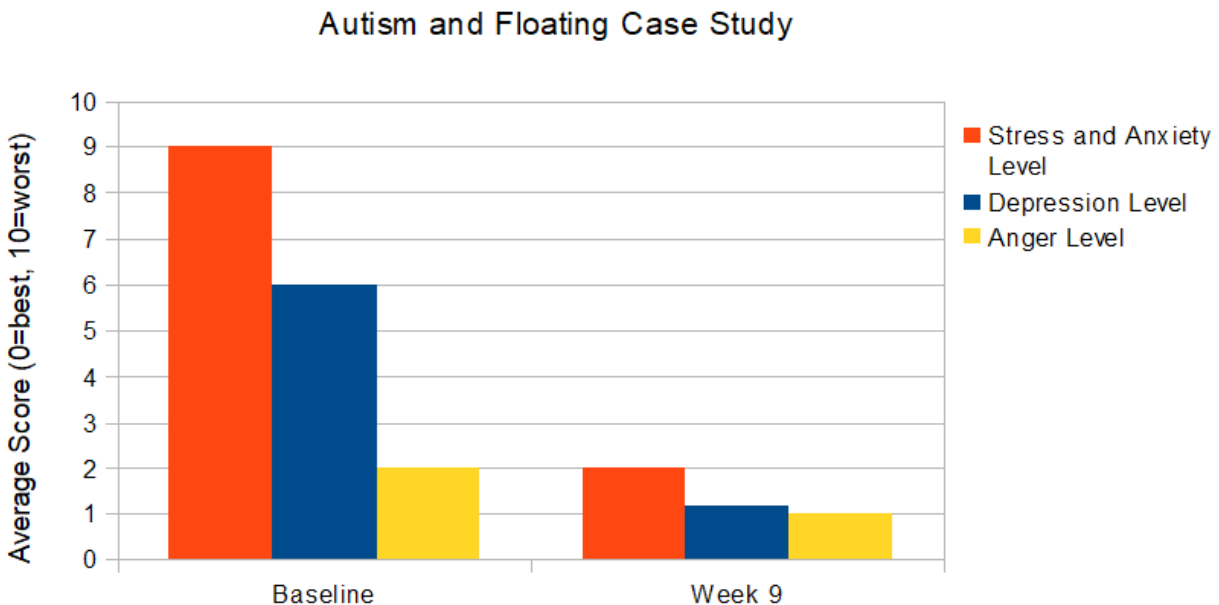
Evaluating the intervention of floating on *stress and anxiety level*, there was a **78% improvement**, representing a drop from a baseline average of 9/10 to a week 9 average of 2/10.

Depression Level (see graph)

Evaluating the intervention of floating on *depression level*, there was an **80% improvement**, representing a drop from a baseline average of 6/10 to a week 9 average of 1.2/10.

Anger Level (see graph)

Evaluating the intervention of floating on *anger level*, there was a **50% improvement**, representing a drop from a baseline average of 2/10 to a week 9 average of 1/10.



One of the biggest gains and a key underlying element of all the ensuing other results, is that of the gains made with the subject's stress and anxiety. Following the emotional component one layer deeper, we can see significant improvement in both depression and anger levels. In talking to the participant, this carried out in terms of feeling better understood at both school and home, including feeling more at ease, having more patience with and feeling supported by his teachers, and his family members.

Level of Focus and Productivity at SCHOOL (see graph)

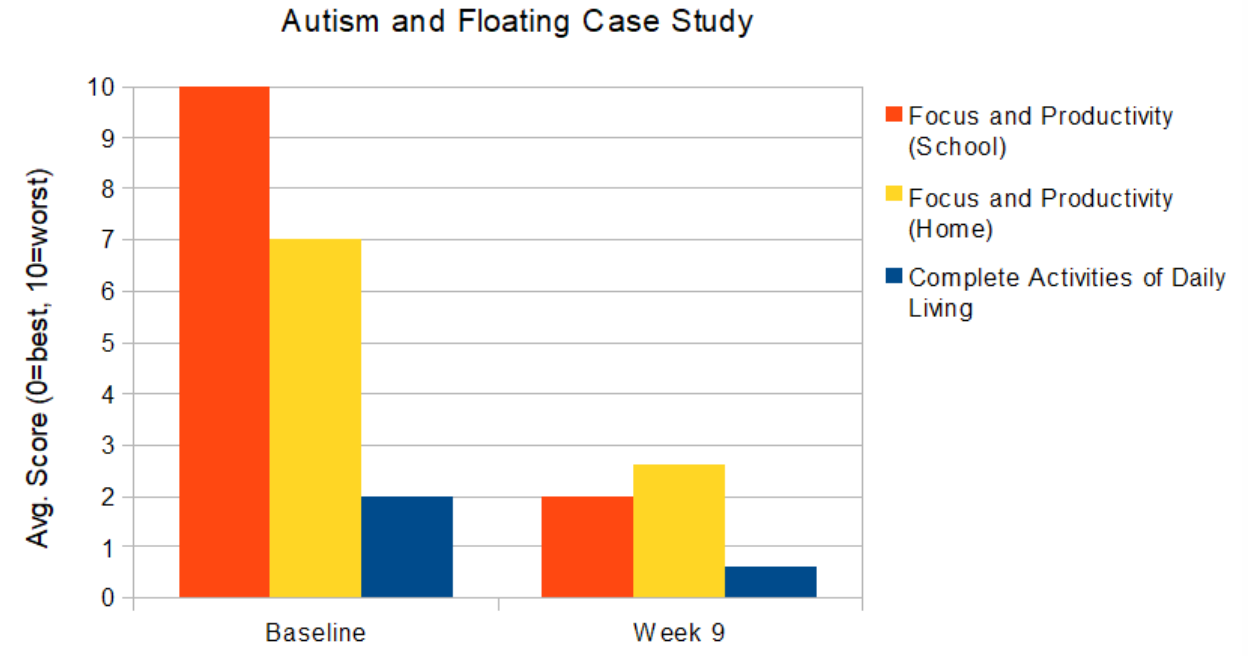
Evaluating the intervention of floating on *focus and productivity at school*, there was an **80% improvement**, representing a drop from a baseline average of 10/10 to a week 9 average of 2/10.

Level of Focus and Productivity at HOME (see graph)

Evaluating the intervention of floating on *focus and productivity at home*, there was a **63% improvement**, representing a drop from a baseline average of 7/10 to a week 9 average of 2.6/10.

Affect /Ability to Complete Activities of Daily Living (see graph)

Evaluating the intervention of floating on *affect /ability to complete activities of daily living*, there was a **70% improvement**, representing a drop from a baseline average of 2/10 to a 9 week average of 0.6/10.



Level of Impulsivity(see graph)

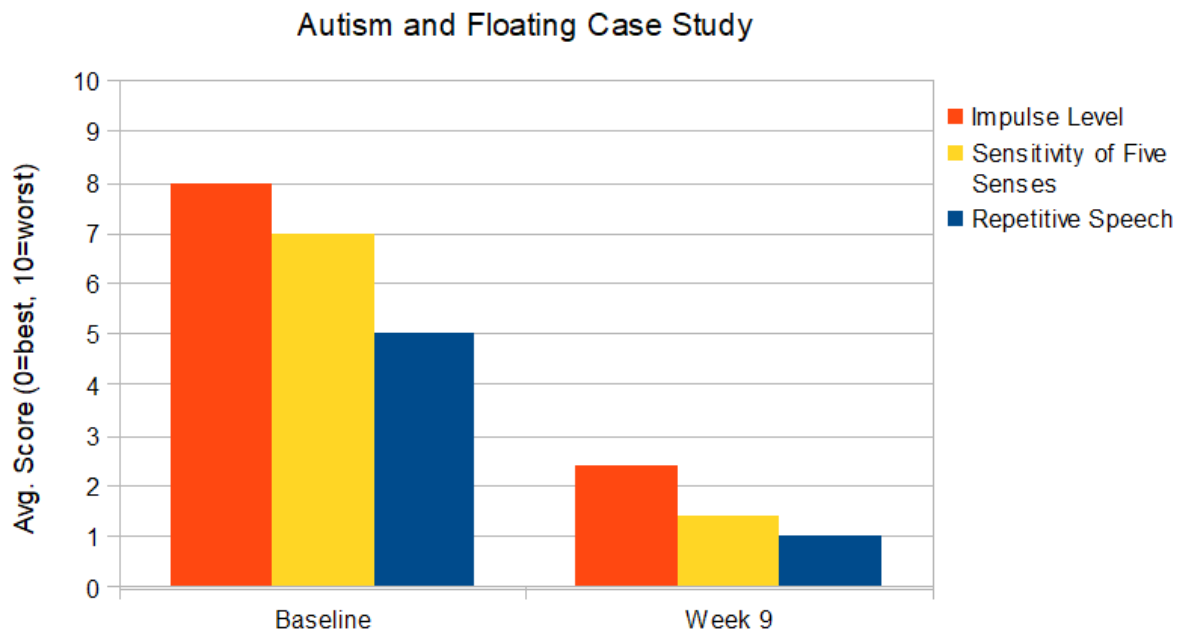
Evaluating the intervention of floating on ***frequency of impulsivity***, there was a **70% improvement**, representing a drop from a baseline average of 8/10 to a week 9 average of 2.4/10.

Sensitivity of the Five Senses (see graph)

Evaluating the intervention of floating on ***sensitivity of senses***, there was an **80% improvement**, representing a drop from a baseline average of 7/10 to a week 9 average of 1.4/10.

Frequency of Repetitive Speech (see graph)

Evaluating the intervention of floating on ***frequency of repeating speech***, there was an **80% improvement**, representing a drop from a baseline average of 5/10 to a week 9 average of 1/10.

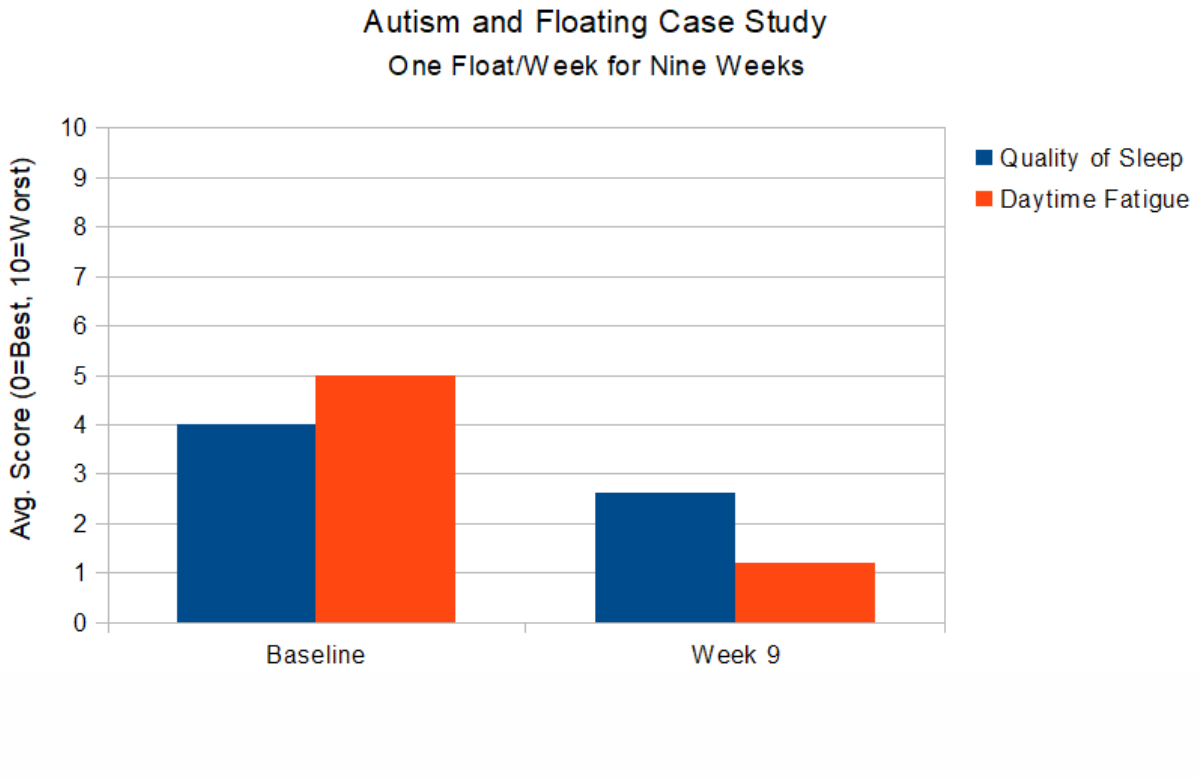


Quality of Sleep Last Night (see graph)

Evaluating the intervention of floating on *quality of sleep last night*, there was a **35 % improvement**, representing a drop from a baseline average of 4/10 to a week 9 average of 2.6/10.

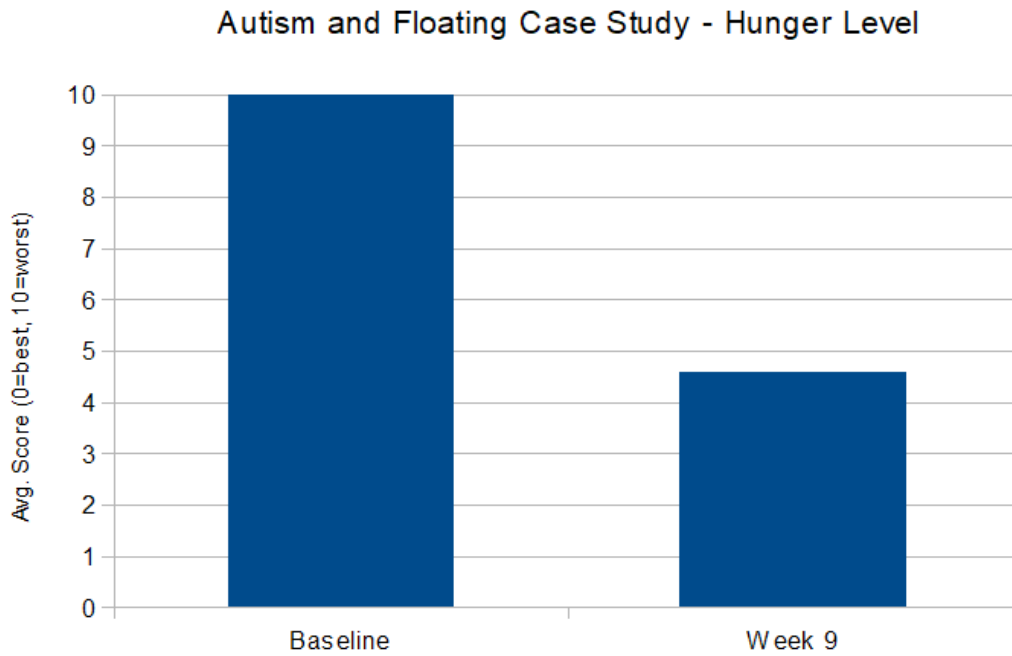
Level of Daytime Fatigue (see graph)

Evaluating the intervention of floating on *level of daytime fatigue*, there was a **76% improvement**, representing a drop from a baseline average of 5/10 to a week 9 average of 1.2/10.



Overall Hunger Level (see graph)

Evaluating the intervention of floating on ***overall hunger level***, there was a **54% improvement**, representing a drop from a baseline average of 10/10, to a week 9 average of 4.6/10.



Results: Lasting Improvement

Below is a description of the lasting improvement for all the categories, 4 weeks post-study with no further floating. With reference these lasting improvements, the original baseline scores are compared to both the end of the study (9 weeks), then two (2) weeks post study and again one month after the study (13 weeks from baseline). There were only a few categories that did not maintain their improvement. Most of the categories showed significant and lasting improvement. What is observed is a gradual trend towards returning to baseline, but still in the zone of improvement, i.e. gains were still present.

Stress and Anxiety Level:

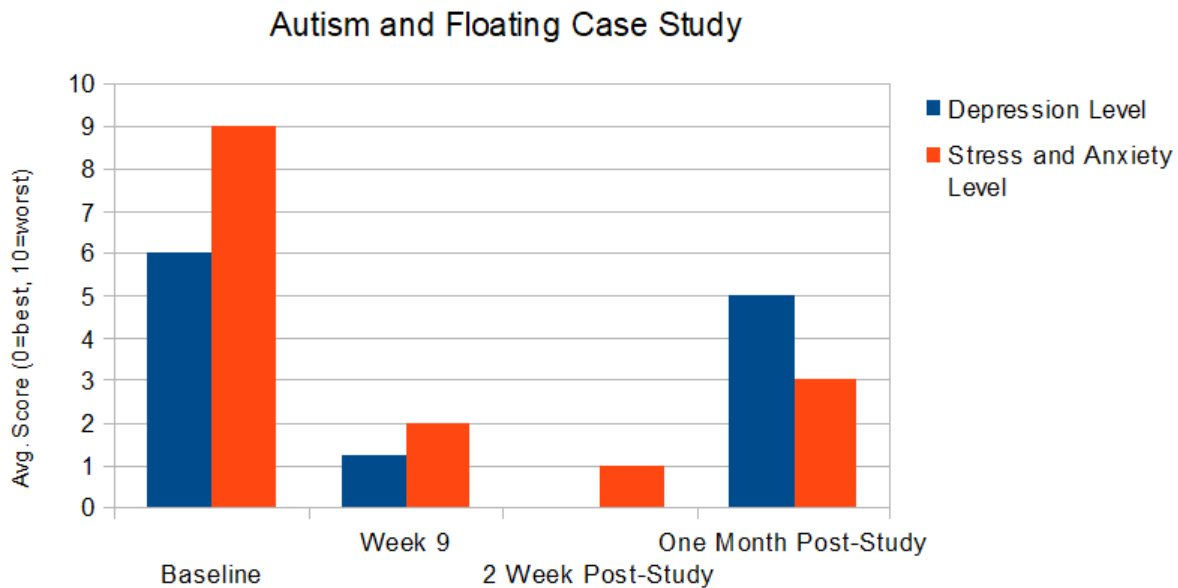
One (1) month post study, 86% of the improvements in stress/anxiety level had remained.

This represents a baseline to end of study gain of 78% and a baseline to one month post study (no intervention) gain of 67%.

Depression Level

One (1) month post study, 21% of the improvements in daily fatigue levels had remained.

This represents a baseline to end of study gain of 80% and a baseline to one month post study (no intervention) gain of 17%.



Ability to Complete ADL's:

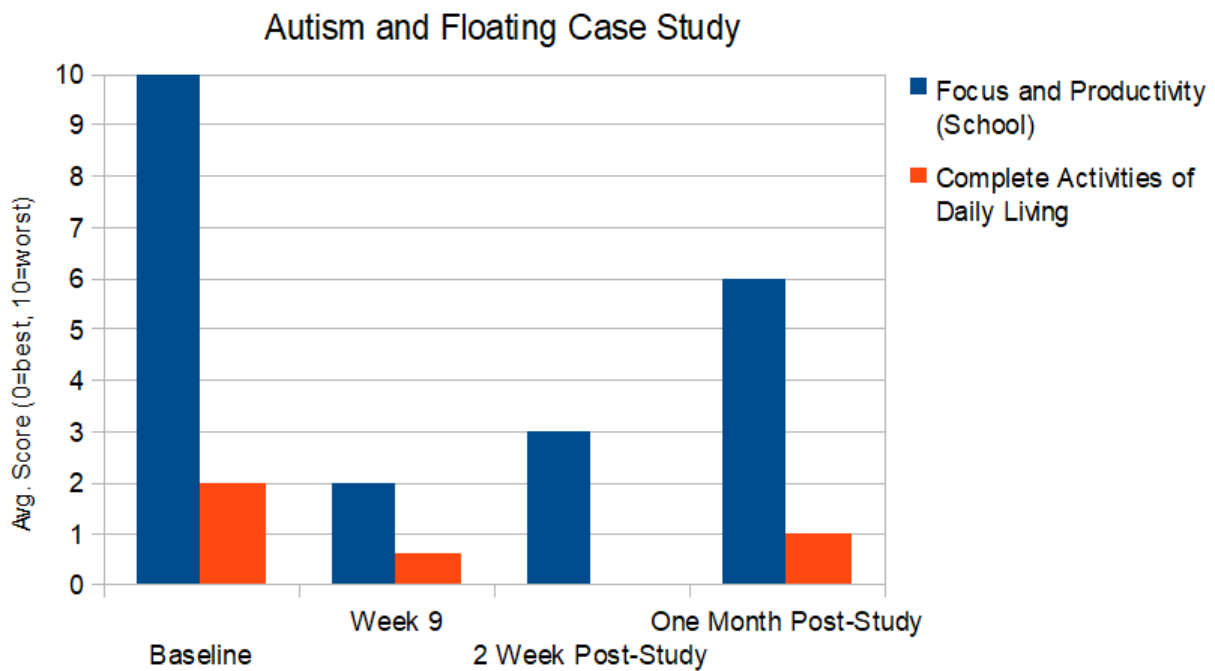
One (1) month post study, 71% of the improvements in ability to complete ADL'S (activities of daily living), had remained.

This represents a baseline to end of study gain of 70% and a baseline to one month post study (no intervention) gain of 50%.

Level of Focus and Productivity at School:

One (1) month post study, 50% of the improvements in focus and productivity at school had remained.

This represents a baseline to end of study gain of 80% and a baseline to one month post study (no intervention) gain of 40%.



Frequency of Repeating Self:

One (1) month post study, 75% of the improvements in repetitive speech levels had remained.

This represents a baseline to end of study gain of 80% and a baseline to one month post study (no intervention) gain of 60%.

Level of Impulsivity

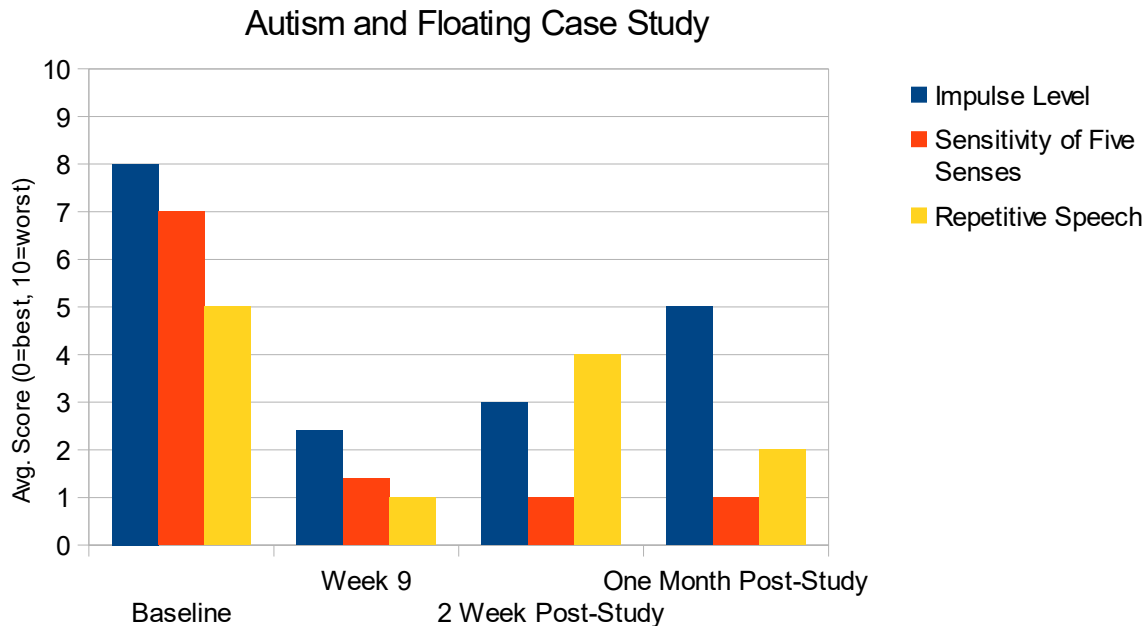
One (1) month post study, 54% of the improvements in impulsivity had remained.

This represents a baseline to end of study gain of 70% and a baseline to one month post study (no intervention) gain of 38%.

Sensitivity of the Five Senses

One (1) month post study, 100% of the improvements in sensitivity of the senses had remained.

This represents a baseline to end of study gain of 80% and a baseline to one month post study (no intervention) gain of 86%.

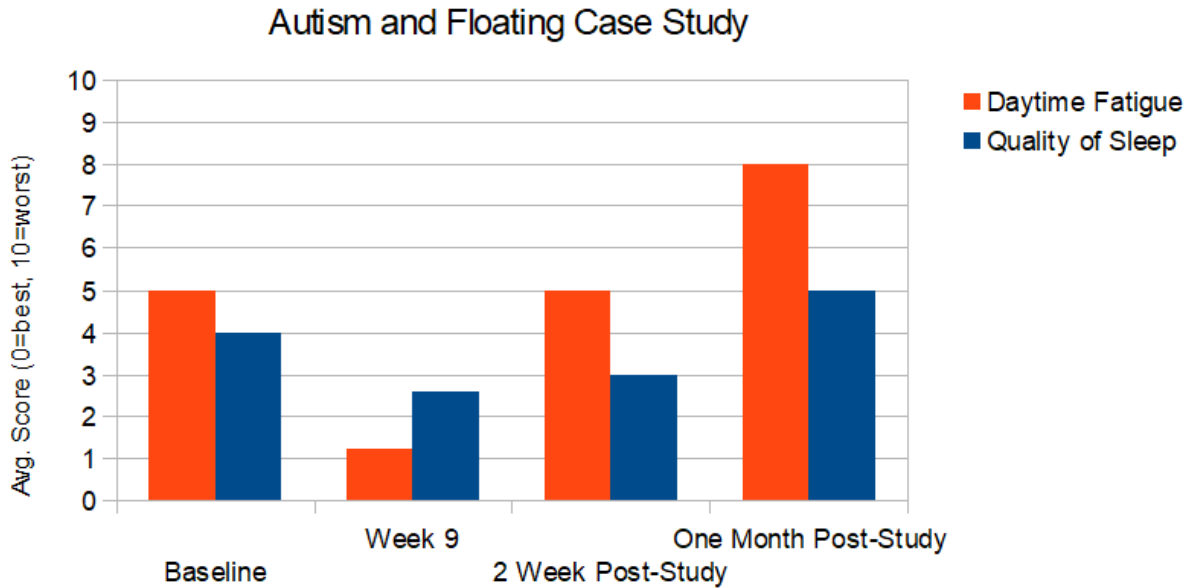


Sleep Quality:

One (1) month post study, no improvements lasted and had returned to the baseline/pre-study value.

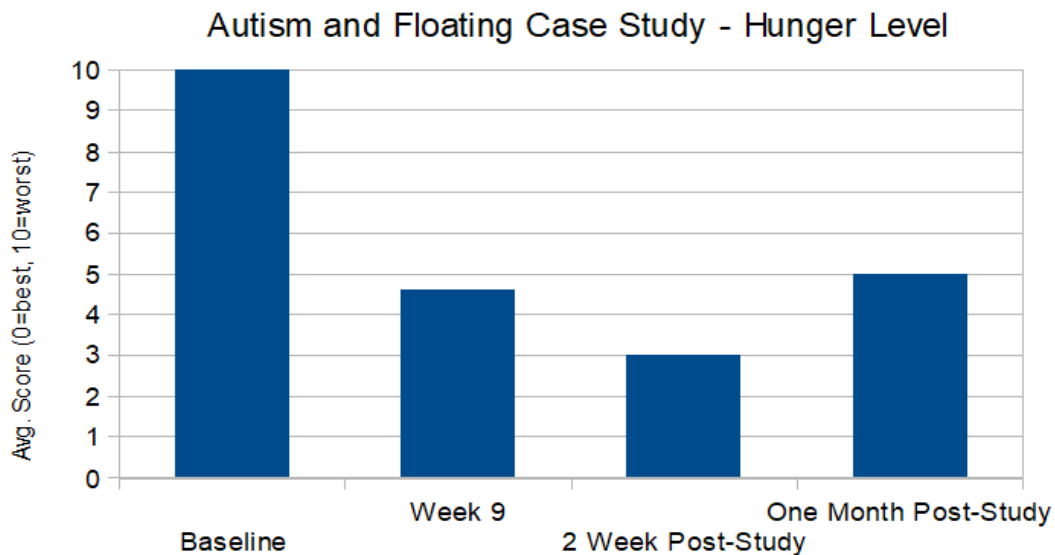
Daily Fatigue Level:

One (1) month post study, no improvements lasted and had returned to the baseline/pre-study value.



Overall Hunger Level

One (1) month post study, 93% of the improvements in hunger levels had remained. This represents a baseline to end of study gain of 54% and a one month post study (no intervention) gain of 50%.

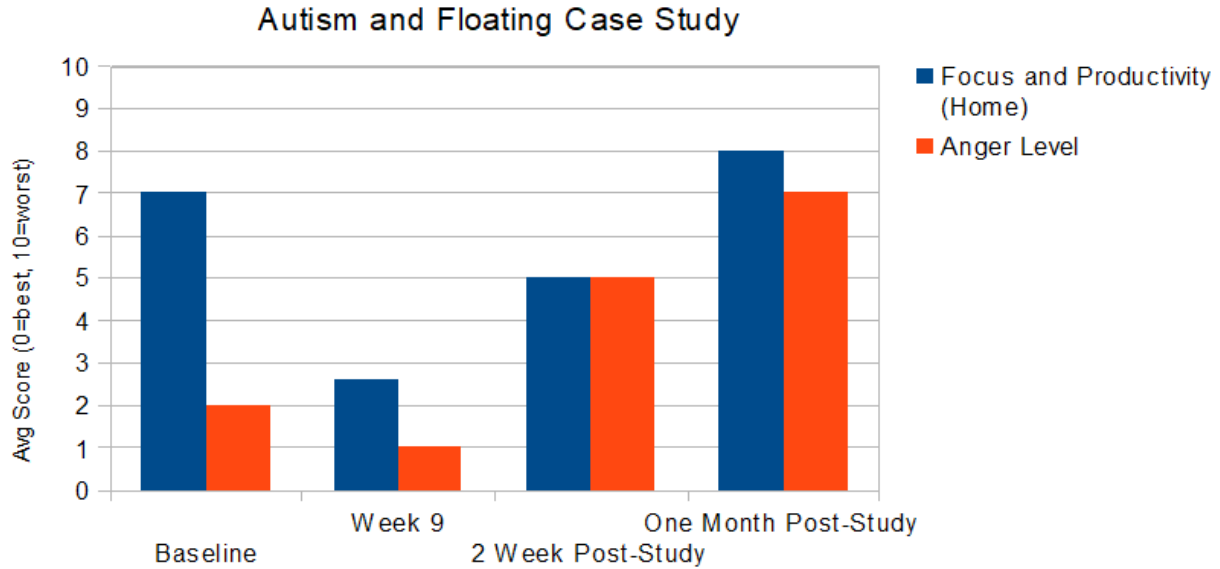


Anger Level:

One (1) month post study, none of the improvements in anger levels had remained.

Level of Focus and Productivity at Home:

One (1) month post study, none of the improvements in focus and productivity at home had remained.



Conclusion

Float therapy, otherwise known as floatation, or floating, has a direct, positive, and lasting effect on multiple common traits of Autism.

Floatation can positively influence an ASD individual's perception of emotional state, repetitive behaviors, sleep quality, energy, focus and productivity levels.

One full month post-study and without further intervention, most areas of improvement were maintained to a significant degree.

Patients, medical professionals and alternative health care providers should consider floatation therapy by itself or in tandem with other mind/body approaches to manage the serial effects of Autism and the collateral effects on the ASD family.

Discussion:

This study took place during the holiday months of November, December, and through New Years' week. The timing of this study was purposeful, as it universally tends to be a hectic, stressful time, despite the normal challenges of Autism.

The participant's mother floated along with him at the same time, in a different tank. The objective here was to have the mother better understand the process for her child and to help him properly score himself on the daily surveys. Further, although she did not score herself during the study, it offered insight into how floating benefited her as the mother and caregiver of the child in the study. This is better understood through the videos that were made that accompany this study.

There was a total transformation of the case study participant that happened over the course of the study. The participant subjectively and objectively opened up over time and the float experience became a safe place that also allowed him to make connections in his mind that he had not done before floating. The experience appeared to free up channels of his mind that made him see things differently, including himself and his observations, which gave him positive reinforcement.

His mother attests to the fact that floating got him to obsess less, to not fixate, and to not be as hyper-focused on things of particular interest to him. This in turn allowed him to pay better attention and to focus on more mindful behavior and relationship interactions including his family, schoolmates, and teachers. Floating also promoted a more mindful behavior with regard to food, eating slower and purposefully serving himself smaller portions.

Floating helped with his school anxiety, which was large and sometimes oppressive to his psyche. Along with this lessening of school anxiety, was less stress eating, less anger, less impulsivity, and less hypersensitivity. He was better able to express himself, had a better understanding of situations, and felt more understood. He repeated himself less and asked less of the same questions.

His mother also stated that overall family stress was reduced due to everyone being on the same page.

His general mood was better and it affected everything. He said that initially, the effects of his float would last about 4-5 days and then lasting even longer, the more he floated. Since he was coming on a weekly basis, the effects almost lasted until his next float and he felt that there was a cumulative effect over the course of the study.

His mother said she is seeing a more normal, typical child. She noted that his hands were less chaffed and cut, due to less playing with them. Also, she states that he is more able to follow multi-step commands and is making more intentional choices rather than impulsive decisions. Subjects that were harder are now seeming easier.

To his surprise and encouragement, early on in the study he had injured his knee in football, and was sent to PT. He had not been able to make his PT appointments, but continued to float. He returned to the orthopedist weeks later and was told that his knee was healed and he could return to football. The physician asked what he did to heal it. He said he floated.

Prior to the study, the subject did not feel rested on a daily basis, nor did he sleep well. This realization became apparent to both the subject and his mother as objectively seen through his overwhelmingly positive sleep quality gains during the case study. It is important to notice the value of floating with regard to sleep and how it cascades over everything else. He said he sleeps better at night and to fall asleep he envisions a feeling of being in and around waves at the beach - recreating the sensation and comforting memory of being in the float pod.

One other observation from both his mother and from observers at the float center, as he floated more frequently, his complexion cleared up. ASD or not, teens are super sensitive about their skin and pimples. This was a huge positive and a confidence builder.

Two months after the study, upon an interview, both the subject and his mother remarked that the gains made during the study were very obvious after not floating on a regular basis. Further, the mom remarked that her son became a better student; her C and D student became an A and B student and that the way in which he did his homework changed to a more thoughtful, inquisitive, careful approach. Further, according to his mom, he became a more respectful, considerate child. There was a huge change in him not asking the same questions repeatedly as he became more aware and reflective of his own behavior. The mom saw these gains even more than the subject himself and she would even say to him, "notice that you are not doing 'this or that' as much anymore."

Lastly, the subject stated after the study, "I now often think about small things that can make my day better." He also created a document called "Floating, A Kid's Guide." Here is an excerpt from his guide:

"Why Float? Floating is a good experience. My grades have gone up, my attitude has improved and my sports performance has increased. Being a teenager can be stressful and floating gives my body the time to recover and heal from everyday life. "

"What is it like? Floating is really relaxing. It is your time just for you. There are many options to personalize your float. You can have the top open or closed. There is relaxing music if you like it and you can even leave the lights on, or turn them off. Remember it's your experience - do what makes you the most comfortable and helps you relax the best. After your float you take a shower and continue your experience in a room that is comforting until you are ready to go back to your day."

"How long does my float last after I leave? Everyone is different. For me I feel the best immediately after and for the next 4 or 5 days after my float. When I had a sports related injury, floating was a major help in the healing process. I was able to get back to the field much quicker than I had expected."

“I am a 13-year-old son, brother, student and football player. I have very mild autism or what some call high functioning autism. I enjoy playing cards and physical activity. While those things I excel at, I have a really hard time focusing at school and paying attention to my surroundings. Sometimes I even repeat myself a lot. It’s something that I don’t notice, but those around me do.

“When my mom first told me that I would be taking part in a floating study, I wasn’t really sure what to think. I didn’t know what to expect. I thought it might be strange, I had never heard of it before and while I wasn’t scared – I was nervous. I really had nothing to worry about.”

"When you first enter the Float Zone you are always greeted warmly. On your first time, you get to watch a video that tells you all about floating. It tells you what to expect and what exactly keeps you floating. There are 1000 lbs. of special salt that is put into each tank to keep you floating. Once you finish the video you get to go to your room. You take a shower and get into the pod.”

Lastly, his mother provided her take on the float experience:

“A snippet of a day in my life includes getting up very early and running children (three energetic boys) to and from school. I also own five successful businesses, three of which I am involved with the day to day operations. Most days, I am going and coming – leading, speaking, or holding meetings. I am highly organized, not by choice, but because I have to be – and when my work day is over (usually around 2pm for the first set of meetings) I get to spend time with my boys when they come home from school. Nice right? Except it isn’t always. Ben, my youngest, and Hunter my oldest have autism – and then there is Ryder somewhere caught in the middle.

For our family, autism looks like anger, repeating directions – over and over, bad grades, individual education plans, fighting through homework and overall working harder on activities of daily living than most folks find easy. Hunter is fearless and this has led to many injuries. Ben is sensitive and feels many things more than most people. Put all of those things together and you have one tired mama! I’ve gotten used to it over the years, so most of the time, I really don’t notice it.

When Hunter was asked to participate in a study, I was thrilled to be offered the chance to float at the same time. I had done it only once before, and I was hoping to be able to find some time to relax. My day is so crammed with everything, it is so hard to get any time to myself. Even though the focus on the study would be Hunter and how his autism was affected by floating, I was anxious to see my results too.

The Float Zone is inviting, and you feel calm just walking in. What ever stress you have is easily left in the parking lot as you walk through the doors. Everyone is so nice and make you feel at ease as soon as you walk in.

During Hunter’s study, the first time I floated, I had a very hard time relaxing. I was so anxious about his experience and my own. I kept concentrating on all the things that I was missing while being there. I kept changing the lights, the music and opening the lid and closing

it. About everything you can think of to NOT relax. I was worried about Hunter. By the second float, all of that had fallen away and I was able to relax. By my third float, I fell asleep. That's right, I fell asleep. From that moment on, I looked forward to our float almost as soon as I left.

There were so many improvements in Hunter. His grades increased. Not only was he able to focus – but he was actually trying hard. He actually cared about a long term goal, and that was huge. I also noticed that he slept better. His sleeping better at night, helped him have a more organized morning which led to a better day overall. His anger diminished. He was kind – not that he wasn't before but he had a self awareness to him now and he was more aware of the others he interacted with.

In my own self, the biggest change that I noticed was my sleep quality. I was able to fall asleep quickly and while my dreams were more vivid, they were pleasant. I was able to rise quickly and honestly had little use for my alarm. I had not expected floating to have such an impact on my life – I had expected to be able to relax while I was actually floating – but to carry that feeling even into my sleep patterns was amazing to me.

As both Hunter and I were better rested, our overall days were better. Both at work or school and at home. For our family, it translated to overall better family interaction and much better and engaging quality time. The ability to get decent rest is so hard for any mother, and floating certainly improved that for me.

If you haven't tried floating, you really should. I am not sure exactly where floating is going to make the most impact on your life, but I know that it will. Set aside the time for a couple of sessions. Invest in that time for yourself. Its worth it, I promise.”