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**Improving Self-Regulation in Early Adolescents**

Nicole Lopez

A Capstone Project for the Bachelor of Arts in Human Development and Family Studies

### **Introduction**

My capstone project focuses on the development of self-regulation in early adolescent middle school years. Self-regulation is the ability to understand and manage your behavior and reactions to feelings and things happening around you. Adolescence is the transition from childhood to adulthood that begins with the onset of puberty and ends with successful independence from the parent. (Casey & Caudle, 2013) In early elementary grades, practices are in place to help with self-regulation. For example, early elementary has recess and free time in the curriculum. Much like adults who need breaks throughout the day, early adolescents also need breaks between sections of their school day. In the last two years, adolescents have been in an interesting place in their development. Covid shutdowns and online learning may have interrupted students' development of self-regulation because they were not around peers or in a school environment. Adolescents have high expectations for their behavior because of their new independence but are they equipt to self-regulate? Part of self regulation comes with controlling impulses (such as throwing, talking, and controlling bodily impulses) and behavior(such as managing their voices and verbal impulses). More guidance on regulating emotions and impulses can lead to various behaviors. To address adolescents' lack of support in self-regulating, I have planned a three-part workshop on the importance of impulse control, self-regulation, and emotional regulation.

### **Needs Statement**

Self-regulation is the practice of being aware of oneself, which means that you are paying attention to all aspects of yourself: physical, emotional, and behavioral. Adolescents have little to no self-regulation practices as they get ready for middle school and high school. As students move on to middle school, there are more classes throughout the day and more academic expectations. Instead, they are going through a shift in their development across many domains and have difficulty regulating their bodies, emotions, and impulses in school. Young adolescents are beginning to experience puberty and more independence, and this can be challenging to navigate their changing lives.

Self-regulation is often described as the ability to understand and manage your behavior and reactions to feelings and things happening around you. (Casey & Caudle, 2013) This means adolescents should be able to understand that their behavior affects the people around them and their environment. Once adolescents can become more aware of their behavior and impulses, they can genuinely self-regulate. This can be done with mindfulness practices to improve their regulation skills.

Adolescents lack proper instruction on regulating themselves, their impulses, and their emotions. Instead, they are going through a shift in their lives, gaining independence based on age and getting more responsibilities. In elementary, more practices are scheduled daily to help students with regulation: free time, morning recess break, and recess after lunch. As students move on to middle school, recess is taken away as there is only an allotted time for lunch that does not include time for play or time to release. Therefore they have no extra movement throughout their day as elementary students do. It is stressful for adolescents who need

instruction on navigating through it. However, there needs to be more research and literature on adolescent self-regulation during heavy literature on early childhood self-regulation.

The brain network associated with this function (self-regulation) includes the anterior cingulate cortex (ACC) and lateral prefrontal cortex. Checa, Rodríguez-Bailón, and Rueda, 2008 describe three brain networks related to aspects of attention: alerting, orienting, and executive control. Alerting is defined as achieving and maintaining a state of high sensitivity to incoming stimuli and has been associated with the frontal and parietal regions of the right hemisphere. Orienting refers to the selection of information from sensory input. The orienting system for visual events has been associated with posterior brain areas, including the superior parietal lobe, the temporal and parietal junction, and the frontal eye fields. Finally, executive attention involves the mechanisms for consciously monitoring and resolving conflict among thoughts, feelings, and responses. Executive attention is a concept derived from neurocognitive literature linked to cognition and cognitive flexibility (Checa, Rodríguez-Bailón, and Rueda, 2008). Executive control is developed from literature on regulation reactivity systems associated with positive and negative responses (Checa, Rodríguez-Bailón, and Rueda, 2008). Low executive control has been linked to issues adjusting in a school environment and their behavior regarding it. (Checa, Rodríguez-Bailón and Rueda, 2008) This is consistent with research since these young adolescents are entering a new school environment with new independence and responsibility. Adolescents try to navigate their new responsibilities, environment, impulses, and thoughts. Adolescence is a developmental period when risk-taking, decision-making, and interpersonal relationships are significant and play essential roles in long-term success (Conover & Daiute, 2017).

The concept of self-regulation is often broken down into emotional, cognitive, and behavioral regulation categories, focusing on presumably individual and distinct functions of these three components (Conover & Daiute, 2017). Research on self-regulation usually focuses on early childhood while overlooking self-regulation in adolescence. While self-regulation is essential in all areas of life, the research needs a deeper understanding and support of adolescent self-regulation.

(Burke 2009)..... explains mindfulness as a particular way of “paying attention,” the awareness that emerges through paying attention on purpose in the present moment and non-judgmentally. Mindfulness has been studied as a psychological construct (Burke, 2009). Three primary elements are presented in the process of mindfulness: attitude, attention, and intention (Burke, 2009). Attitude is non-judgmental toward acceptance, trust, patience, curiosity, and kindness. Attention includes focused and constant attention. Intention drives an intention to practice directing focus and keeping attention. This allows one to develop a de-centered perspective on their own experiences. This can lead to a shift in one's mindset to be able to observe, recognize and stop old patterns and continue on the path to self regulation. For example, an adolescent in the classroom during instruction: students should read a passage on their own and answer the follow-up questions. Some students begin whispering, not staying focused, fidgeting in their seats, recognizing the actions of their peers, and not allowing themselves to participate in the impulses. That is observing, recognizing, and stopping old patterns of impulsivity.

There are mindfulness-based approaches to self-regulation. There is MBSR (mindfulness-based stress reduction) and MBCT (mindfulness-based cognitive therapy). Both

approaches focus on developing mindfulness; the only difference is that the methods by which they are taught mindfulness skills vary. Mindfulness practices are intended to bring awareness to what is happening internally and externally with emotions, impulses, and regulation without judgment. The curriculum includes practices and exercises that intentionally focus on bringing awareness to oneself. The use of mindfulness meditation practices to reduce distress has been a feature in western medicine for over 30 years. This practice has been used to reduce stress and discomfort, including cognitive-behavioral therapies and relaxation techniques. (Perry-Parrish et al., 2016) The program's content focuses on mindfulness meditation, self-awareness of the body, and actions, and it addresses barriers to the use of these practices during stressful moments. (Perry-Parrish et al., 2016) As stated previously, early adolescents are experiencing new self-independence and puberty, which can create several stressors that can cause emotional and physical outbursts. Exposure to these stressors may put early adolescents at risk for emotional and behavioral problems. MBSR targets emotional and attentional processes associated with stress and can support the development of adolescents' self-regulation. Mindfulness has been speculated to improve the self-regulation of emotions, behavior, and cognitive processes.

### **Theory**

Albert Bandura's social cognitive theory of self-regulation states that human behavior is extensively motivated and regulated by the ongoing exercise of self-influence (Albert Bandura, 1991). The three significant components of self regulation are self-monitoring one's behavior, judgments of one's behaviors, and environmental circumstances. Self-monitoring is the ability to realize the behavior and its effects. For example, with early adolescents and language outbursts, how will their outburst affect the classroom? Judging one's behavior is the ability to alter behavior based on one's standards. For example, suppose one of the students has a personal standard that they would never swear during instruction; then they are less likely to be influenced by other students swearing during instruction. Environmental circumstances are everything happening around that influences behaviors. For example, Bandura explains that most human behavior, being purposive, is regulated by forethought. People form beliefs about what they can do, they anticipate the likely consequences of prospective actions, and they set goals for themselves. They otherwise plan a course of action that is likely to produce themselves and guide their action in an anticipatory, proactive way (Albert Bandura, 1991). In other words, behavior is planned; it comes from an idea formulated in the prefrontal cortex and executed through actions, such as: talking while the teacher is talking, throwing objects at students to get their attention, running around the hallways, and having small outbursts during instruction. The social aspect of this theory is believed to be influenced by peers; if their peers are expressing behaviors, more likely than not, the others will follow.

This theory connects to my project because self-regulation can be a social experience. Early adolescents have come into a stage of independence, and their peers very easily influence



them. This also connects to my project because the participants in my project are homeschooled students. Therefore their social experiences with their peers are different; they don't have as many social interactions the way mainstream students do.

### **Consideration of Diversity**

My workshop was performed in the middle school group, at First Baptist Church in Watsonville, Ca. After observing for a few days leading up to my workshops, I discovered that the group mainly consisted of white students, with the exception of a few Hispanic students and Filipino students. All students spoke English, so I did not need to change my project to another language. The students are homeschooled, but the church acts like a hub or meet-up. There can get some tutoring and music and P.E credits. It is not required to attend the hub, some of the students used it as a social aspect in place of school, so I didn't have much consistency with the students. The students that did attend were fairly close friends, so the energy was high. It is not as structured as a regular classroom, so I had some difficulties getting them to settle down right away. The setting was in the basement of a church. I had to get everything approved by the senior pastor, he wanted to ensure that the integrity of the environment was still evident. I was in a church setting, and the workshop needed to respect that. Most of my participants were boys, and some were unwilling to participate; as stated before, adolescents are easily influenced by their peers, and they participated because their peers did. If I had younger students, I believe they would have been much more eager to participate because younger students tend to like to be involved.

### **Learning Outcomes**

I have put together three workshops that students will learn from. After the three workshops, students will be able to do the following.

1. After the workshops, students will be able to understand the part of the brain that controls their emotions and impulses and that their brain is still developing.
2. Students will be able to distinguish examples of good self-regulation behaviors and destructive self-regulation behaviors at school. They will be able to list instances where they will need to use their self-regulation skills.
3. Students will be able to identify activities and practices that will help them (calm their minds ) and aid their self-regulation.

### **Methods**

#### **Location and Participants**

The location was Watsonville Baptist Church in Watsonville, Ca. The Church is a homeschool hub or meet-up. They can use the space for extra tutoring, worship (which can be used as a music credit), physical education, and bible study. It runs from 4 pm to 7 pm on Mondays, Wednesdays, and Fridays. I am unsure how many students are enrolled. My 14 participants comprised eight boys and six girls, ages 10-12. There were 3 Hispanic students, and the rest were white students. Students are not required to attend the meet-ups; it is just an opportunity for extra help and socialization that they would not get from being at home.

**Procedures and Materials**

For the first workshop, I introduced myself to the group. I gave them a brief explanation of what they could understand about my project, and then I began the lesson on what part of the brain self regulation comes from. First, I asked them if they knew what self regulation was. I broke it down and self means I and regulation is to regulate or control. Then I gave them the definition of self regulation. I then had a brain structure that I could take apart and show them the different parts of the brain. I passed it around so each student could take a look and see all the parts. I explained that self-regulation comes from the prefrontal cortex. I explained how their prefrontal cortex is still developing and that it is ok that you cannot regulate themselves all the time because they are still learning how to do that. I then explained that their behavior starts in their brain and then moves on to an impulse, then they decide whether or not to act on that impulse. I then gave them a brain coloring page as a fun activity to fill in the time. We talked about brain size and more about self-regulation as well, and we all colored together.

On day two, we started off the workshop by revisiting the meaning of self-regulation and what it is. We then played a game called silent ball. The rules of silent ball: stay still, make no noise, and catch the ball. If you broke any of the rules, you were out of the game. That means laughing at someone for dropping the ball, jumping around with excitement, and asking for the ball to be thrown at you; all of those things could get you out of the game. All the students wanted to stay in the game, so they worked hard to stay still and quiet and catch the ball. We played 3-4 rounds of the game. I could see some of the students trying really hard not to burst out laughing, and they were using the squares on the floor to stay in place. After the game, we again revisited self-regulation and talked about how the game really tests your self-regulation skills. I

then showed them a video on youtube ( [https://youtu.be/j0YDE8\\_jsHk](https://youtu.be/j0YDE8_jsHk) ) about self-regulation. The video was about the cookie monster with a big plate of cookies in front of him, and he had to wait to eat them until someone came back with milk. After the video, I read them a scenario about a student in an environment that is testing their self-regulation. I originally had three scenarios to read to them, but the first scenario ended up opening up a conversation. We discussed some of their own scenarios they have experienced where they really needed to use their self-regulation skills. This then led to a discussion about when they would need to use their self-regulation skills. I gave the students a stack of sticky notes and colored pens and asked them to give me instances where they would need to use their skills. Most of their answers were pretty generic: while reading, during small groups, during prayer, etc. Some of the responses were pretty comical: waiting for chipotle, waiting in line for the water fountain. I believe my learning outcome was met because the students were able to come up with their own instances in which they needed to use their self regulation skills.

We started the workshop by revisiting the meaning of self-regulation. A few students had some instances that they wanted to add to the conversation from the workshop before. I then opened up the discussion by asking them, “what would you do if you needed to calm down”? Some of the students said: deep breaths (smell the flowers and blow out the candle), take a walk, spell their names in their heads, and ask for a break. I showed them a visual of the pressure points on their hands (see appendix). There are certain points on your hands that you could squeeze and apply pressure for an amount of time that can help you relax, relieve stress, headaches, and eye strains, and refresh your mind. I also showed them a little trick with breathing with your fingers, you follow and trace the outer edges of your finger, as you trace up,

you take a deep breath in, and as you trace down, you exhale. We talked about how there were things you could do quietly to calm your impulses, and there were things you could do loud that could calm your impulses. I gave everyone some sticky notes and asked the students to give some tips to help them self-regulate their impulses. Most of their responses were what we had already talked about, but one of the concrete responses was, “think about why I shouldn’t do this and what will happen.” I believe that they understood the concept.

### **Results**

The learning outcome of the first workshop was that the students would be able to identify where in the brain self-regulation starts. After the first workshop, the student's time was cut short, so I was unable to give an assessment. The results are inconclusive if the learning outcome was met due to the complications I had.

The learning outcome for the second workshop after workshop two, students were asked to list or give examples of when they would need to use their self-regulation skills. Eleven out of the 14 students (78.5%) were able to list instances where they would need to use their self-regulation skills. They were able to list real-life situations where they needed to use their self-regulation skills. The students came up with ideas such as: waiting in line for food, and waiting for their tutor to set up the next activity. Two students got picked up by their parents before I could give my assessment, and one student didn’t write anything down. I would say that my learning outcome was fully met for workshop number two.

After workshop number three, students will be able to identify activities and practices that will help them (calm their minds ) and aid their self-regulation. Students were asked to list or give examples or tips on how to calm down and help with self-regulation. Nine out of 14

students (64.29%) were able to write and list examples or tips. The third workshop was conducted on Friday, which I was informed was a low-attendance day. Regardless I believe the learning outcome was partially met because the students that did attend the workshop were able to list examples.

### **Discussion**

My project had some successes. The participants were eager to be part of the workshop. They came up with real-life scenarios that were not discussed in the workshop which meant they were making connections. The focus of my project was to improve self-regulation skills in early adolescents. My workshops were set up as a learning experience for the participants, and then I assessed if they learned from my workshop. I believe my learning outcomes were met. My participants were excited to be in the workshops. They are all homeschooled students; therefore, they were excited to participate in something. Each student was able to answer my questions after each workshop, and they even held open discussions while answering the questions to help each other out. It was definitely a social experience for them as well because they don't get as much social interaction being homeschooled as students in mainstream schools.

A few of my limitations were time and weather. On the day of my first workshop, the weather was very rainy; therefore, all of the students were inside, even those who did not participate in the workshop. Therefore there were a lot of distractions. Some of the students got picked up in the middle of the workshop, so they were not able to complete the tasks. They were able to have a discussion about what self-regulation was, which was cut short due to what was happening in the environment.

Something I would really like to have done differently was to have more time to observe the students after my workshop. I would have liked the opportunity to see if they used their skills or to see if they truly learned something from the workshop. I would have liked to observe them a few days after the workshop as well to see if they could use their self-regulation skills on their own in a different setting. Overall I truly enjoyed this project, and I think the students did too.

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Appendix

Brain Coloring Page Workshop #1

Name: \_\_\_\_\_

### Your brain does so many jobs!

Use the color key to color and match the different parts of the brain to their jobs:

1 - green	4 - brown	7 - yellow
2 - purple	5 - red	8 - pink
3 - orange	6 - pink	9 - white

[upennglia.com/neuro-coloring-pages](http://upennglia.com/neuro-coloring-pages)

balance 6

hear 3

breathe 9

see 7

taste 2

5

8

learn 3

7

talk 4

4

2

3

smell 1

1

9

6

touch 8

2

pay attention 1

5

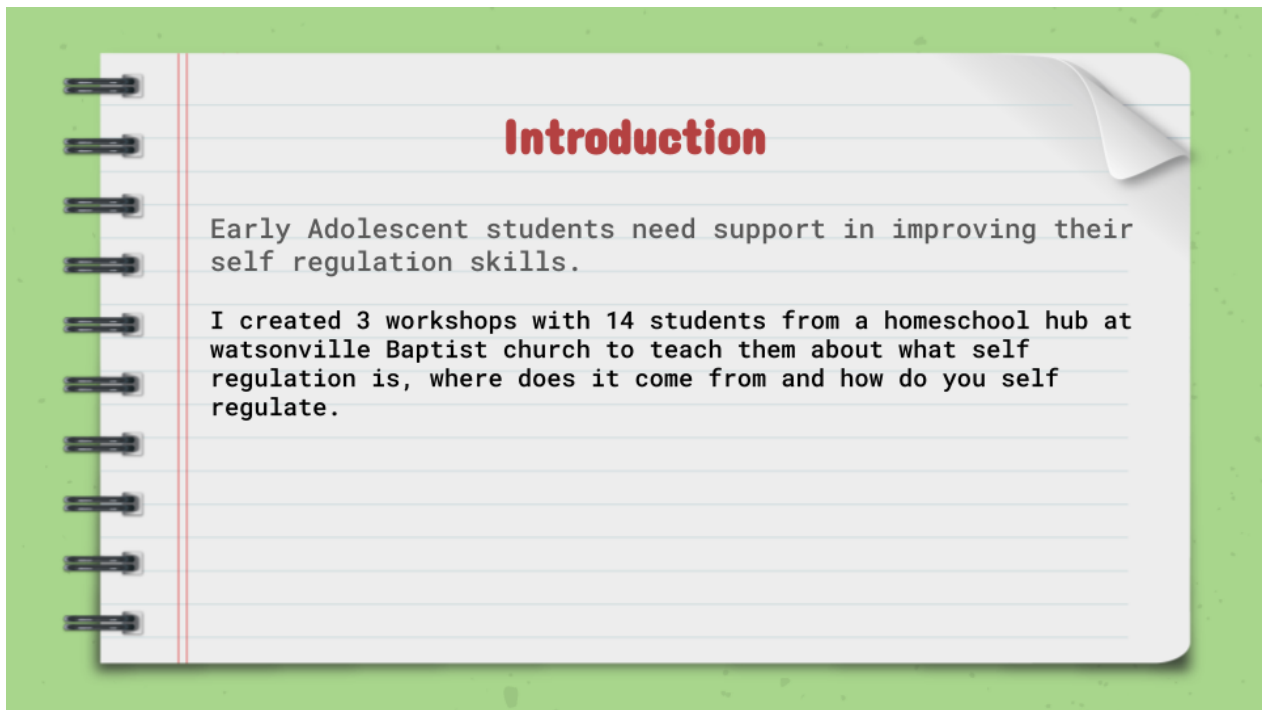
move 8

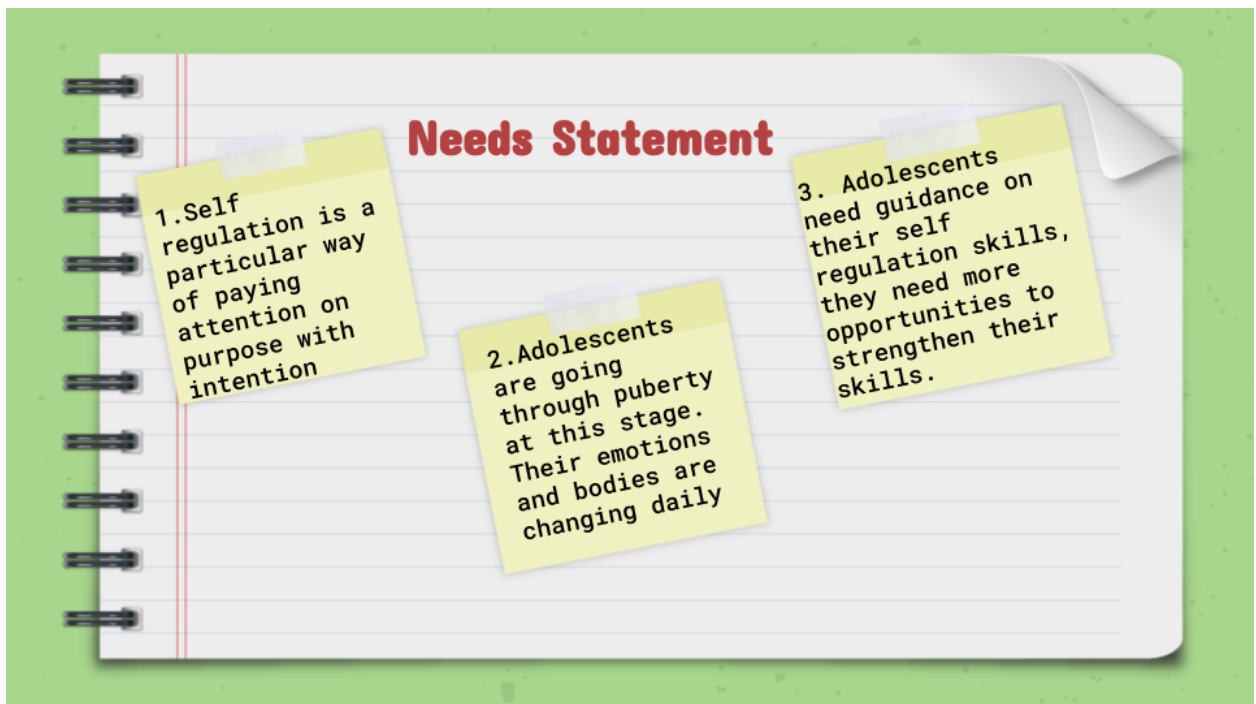
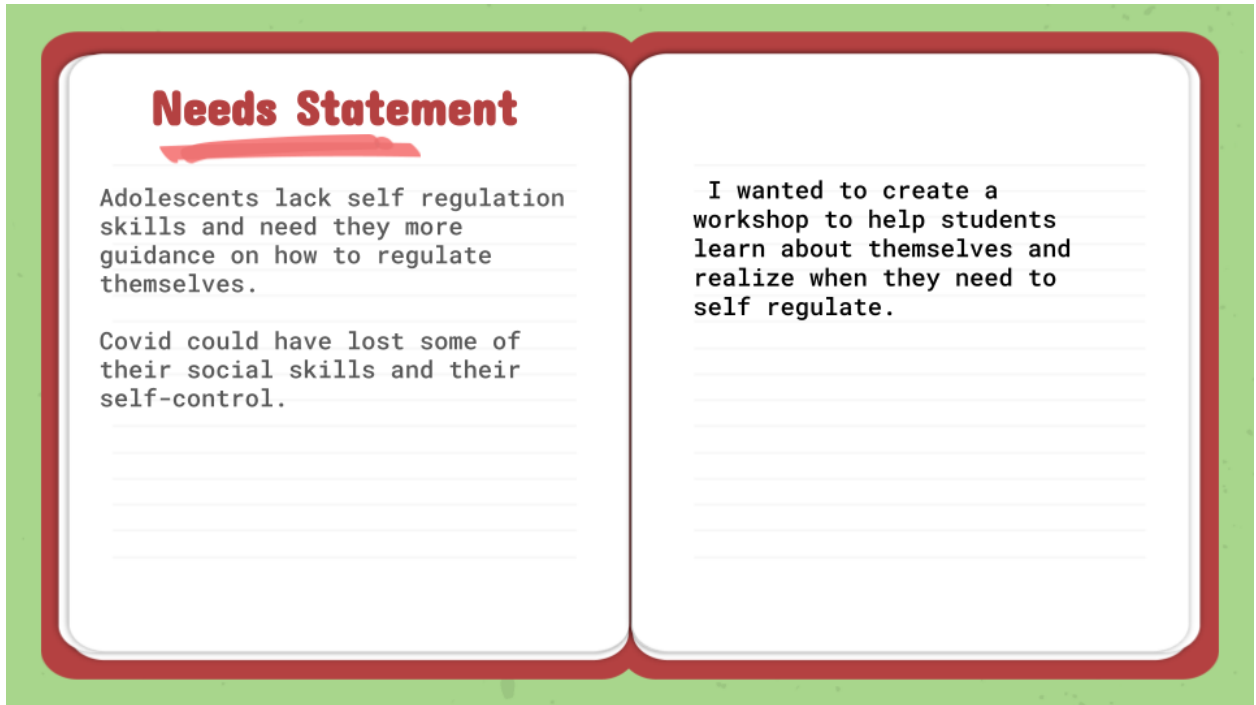
Student Responses. Workshop #2

Pressure Point Visual. Workshop #3



Student Responses. Workshop #3






## Theory


**Social Cognitive Theory of Self Regulation. Albert Bandura (1991)**

Human behavior is extensively motivated and regulated by the ongoing exercise of self-influence


**Self monitoring of one's behavior**

 The ability to realize one's behavior and its effects on their environment .


**Judgment of one's behavior**

 The ability to alter one's behavior based on personal preferences.

**Environmental Circumstances**

 Everything happening around that influences one's behavior.

## Learning outcomes



I designed these workshops because early adolescents need support on how and when to regulate themselves

- After the lessons, students will be able to understand the part of the brain that controls their emotions and impulses and that their brain is still developing.
- Students will be able to distinguish examples of good self-regulation behaviors from bad self-regulation behaviors at school and will be able to list instances where they will need to use their self-regulation skills
- Students will be able to identify activities and practices that will help them calm their minds and aid their self-regulation.

**Methods**

**Site/Location**  
6th/7th grade homeschool  
Hub at First Baptist  
Church. Watsonville, Ca

**Participants**  
14 Students  
8 boys  
6 girls

**Diversity**  
3 Hispanic  
11 White

**About the topic**  
All the students spoke  
English.

**Delivery/Curriculum**


**Day 1**  
Discussed self regulation  
definition  
Discussed Self regulation in the  
brain with a brain figure  
Brain coloring page

A brain  
figure, Brain  
coloring page, Foam  
basketball, Cookie  
Monster  
video, Colored pens

**Day 2**  
Revisited self regulation  
Silent Ball  
Self regulation video  
Open discussion when they  
would need self regulation  
Sticky notes exercise


**Day 3**  
Revisited self regulation  
Open discussion on what to  
do to self regulate.  
Sticky note exercise.

### Assessment Results




After the lessons, students will be able to understand the part of the brain that controls their emotions and impulses and that their brain is still developing.


### Discussion

 I had brain figure that I was able to show them where the prefrontal cortex was, and talked about how their brain is still growing and developing, and everytime you use self regulation skills your prefrontal cortex is growing.

### Assessment


 It is inconclusive if the Learning outcome was met. There were too many distractions.

### Assessment Results




Students will be able to distinguish amplex exgood self-regulation behaviors from bad self-regulation behaviors at school and will be able to list instances where they will need to use their skills

### Discussion


 Played silent ball  
Read scanariors  
Video  
Talked about when you would need use self regulation

### Assessment

 The Learning outcome was met. The discussion led to their real life experiences where they needed to use their skills. They were able to list instances where they needed to use self regulation



## Assessment Results



Students will be able to identify activities and practices that will help them calm their minds and aid their self-regulation.

## Discussion

Revisited self regulation. "What would you do if you needed to calm down?"

Pressure points

Sticky note exercise

## Assessment

I asked the students to write down tips for self regulation and what they did to calm themselves. They were able to

Discussion

**Limitations**

Some students did not show up to day two, and some students were picked up before the workshop started.

**Successes**

The students were able to come up self regulating behaviors and scenarios on their own

**I think that the students didn't show too much interest in how regulation starts in their brain, but I think they enjoyed making connections**

