

Developing Self-Regulation in Young Children:  
Lessons from Research

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Self-Regulation in Young Children

Children under age 5 do not have a reputation for self-regulation.

What are the signs you observe in preschool children that self-regulation is a challenge for them?



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Connection to School Readiness

Kindergarten teachers most often identify young children as not ready for school because children show poor \_\_\_\_\_.



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 Self-Regulation in Young Children

Why do young children struggle with self-regulation?

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**Session Objectives**

At the end of this presentation, you should be able to:

- Understand what self-regulation is and how it is based on **executive functions**.
- Identify the three components of executive functions – **inhibition**, **working memory**, and **mental flexibility** - and how they support self-regulation.
- Describe how the growth of self-regulation is based on the maturation of the brain.
- Understand the influences of temperament and stress on individual differences in self-regulation.
- Describe what parents and education staff can do to support the growth of self-regulation.

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**Session Agenda**

Here's what we're doing today:

1. Defining self-regulation
2. Self-regulation and executive functions
3. Self-regulation and the developing brain
4. Individual differences in self-regulation: effortful control
5. Stress and its influence on self-regulation
6. How can parents and education and care providers support the growth of self-regulation in young children?

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**What is Self-Regulation?**

The ability to internally manage one's attention, thinking, emotions, and behavior without external control

self-control

doing what *doesn't* come naturally



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**Self-Regulation Develops Over Time**

Self-regulation takes time to develop

It is based on the growth of...

- areas of the brain that enable self-control
- temperament
- cognitive abilities related to memory, judgment, and mental flexibility
- experience with culture and adult practices for helping children achieve self-regulation
- capacities for managing stress

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**Executive Functions**

Self-regulation is based on the development of cognitive processes that enable self-controlled, goal-directed thought and behavior called *executive functions*.



Executive functions are like the air traffic controllers of the mind

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 What are Executive Functions?

Executive functions include...

- **Inhibition**: the ability to resist a strong inclination to do one thing and instead do what is most appropriate or needed

How do you use inhibition in self-regulation?  
How can young children learn to do so?



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 What are Executive Functions?

Executive functions include...

- **Working memory**: holding information in mind while mentally working with it

How do you use working memory in self-regulation?  
How can young children learn to do so?



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 What are Executive Functions?

Executive functions include...

- **Mental flexibility**: being able to switch perspective, attention, or mental focus

How do you use mental flexibility in self-regulation?  
How can young children learn to do so?



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**What are Executive Functions?**

Executive functions include...

- Inhibition
- Working memory
- Mental flexibility



How are they important to how preschool children learn, pay attention, solve problems, and get along with other children and the teacher?

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**Development of Self-Regulation**

At preschool, what must you do to go outside when it's raining?

- Finish your activity
- Put things away
- Go to your cubby and put on your rain gear
  - Take off your shoes
    - Sit down on the floor
    - Pull off shoes and put on boots
    - Stand up
  - Put on hat and coat
- Join other children and teacher at the door

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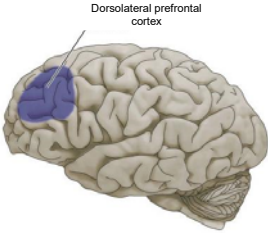
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**Development of Self-Regulation**

Self-regulation develops very slowly



Dorsolateral prefrontal cortex

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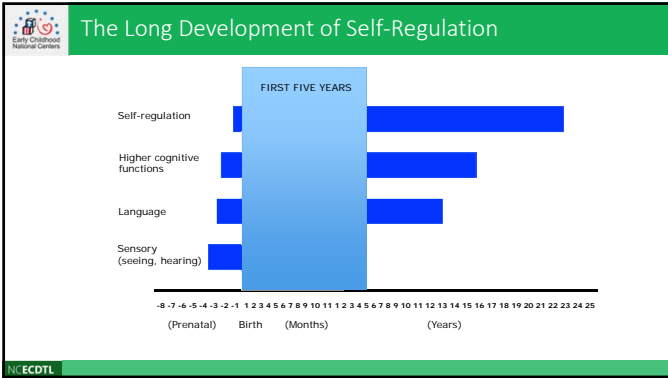
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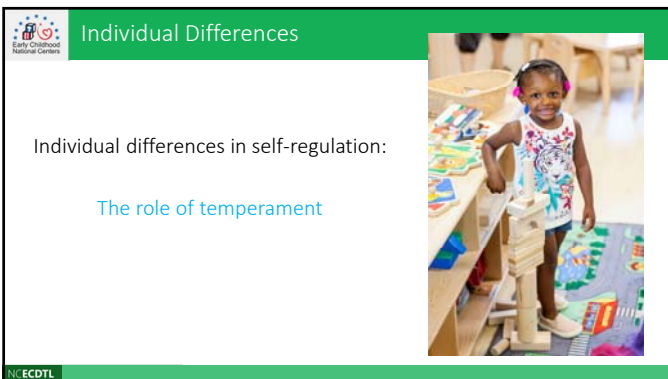
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**Effortful Control**

“the ability to inhibit a dominant response to perform a subdominant response”

Which executive function does this resemble?



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**What do We Expect of Children?**

A national survey by ZERO TO THREE asked parents of young children at what ages children should be capable of important developmental achievements.

At what age did parents expect that a young child could...

- Follow instructions like “go pick up your shoes”? 1.7 yrs
- Share and take turns with other children? 1.9 yrs
- Control his or her emotions, such as not having a tantrum when frustrated? 3.1 yrs

Are these realistic expectations?  
Are they consistent with the child’s brain maturation?

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**Stress**



Why does stress impair self-regulation?

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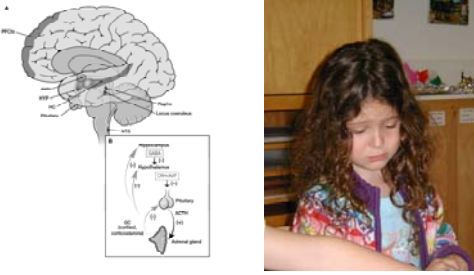
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### Stress and Self-Regulation



The diagram on the left shows a sagittal view of the brain with labels for the amygdala, hippocampus, and prefrontal cortex. Below it is a smaller diagram of the stress response pathway involving the hypothalamus, pituitary gland, and adrenal glands. To the right is a photograph of a young girl with long dark hair, looking down at something in her hands.

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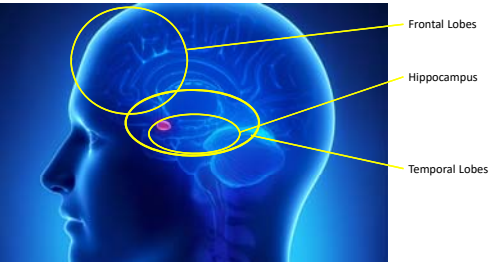
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### Stress In The Brain



The diagram shows a blue-tinted profile of a human head with yellow circles highlighting the frontal lobes, hippocampus, and temporal lobes. Labels with lines pointing to these areas are: Frontal Lobes, Hippocampus, and Temporal Lobes.

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### Supporting the Development of Self-Regulation



The left photograph shows a man sitting on the floor with a young boy, who is holding a small object. The right photograph shows a woman smiling and hugging a young child from behind.

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How can we help young children with self-regulation?

5/23/05

SOFIA



Hallie and Emily said  
I was gonna get grounded  
and then I felt so mad  
Then I wanted to do the  
mad dance.

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Supporting the Development of Self-Regulation

How do we help children with self-regulation?

- Developmentally appropriate expectations
- Guide children with “do” – not “don’t” – statements
- Enable children to anticipate transitions
- Help children use words to regulate their actions and thinking
- Predictable but flexible daily schedule
- Options for children’s self-regulation (e.g., quiet corner)
- Model emotional self-control, cognitive flexibility, attentional focus
- Recognize individual differences in self-regulation

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Additional Resources

Harvard Center on the Developing Child  
Building the Brain’s “Air Traffic Control” System: How Early Experiences Shape the Development of Executive Function  
<https://developingchild.harvard.edu/resources/building-the-brains-air-traffic-control-system-how-early-experiences-shape-the-development-of-executive-function/>

Ross A. Thompson  
Doing what *doesn't* come naturally: The development of self-regulation  
[http://christinaneumeyer.com/yahoo\\_site\\_admin/assets/docs/Doing\\_What\\_Doesnt\\_Come\\_Naturally\\_-\\_Early\\_Dev.294102146.pdf](http://christinaneumeyer.com/yahoo_site_admin/assets/docs/Doing_What_Doesnt_Come_Naturally_-_Early_Dev.294102146.pdf)

ECLKC Mental Health Resources  
<https://eclkc.ohs.acf.hhs.gov/mental-health>

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Wrap-Up

Answering Your Questions

Thank you for joining us, please click the link to complete the evaluation for this webinar:

[https://www.surveymonkey.com/r/FrontPorch\\_09-04-18](https://www.surveymonkey.com/r/FrontPorch_09-04-18)

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Thank you!



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