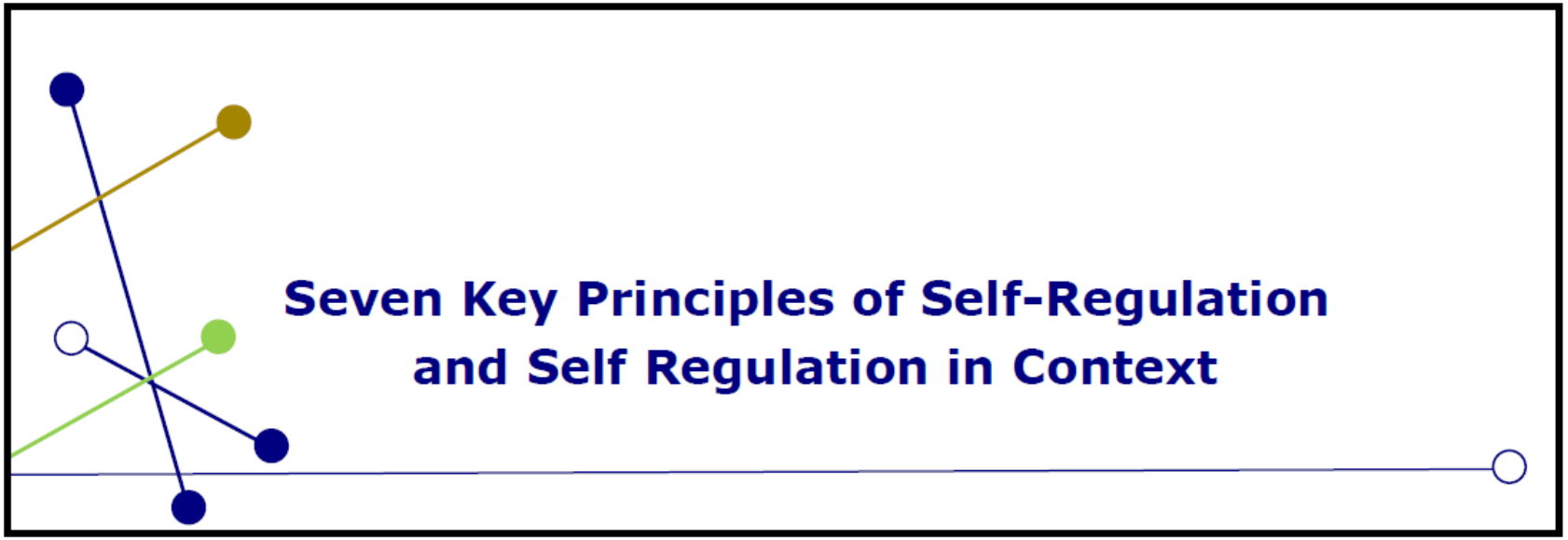
SELF-REGULATION AND TOXIC STRESS: FOUNDATIONS FOR UNDERSTANDING SELF- REGULATION FROM AN APPLIED DEVELOPMENTAL PERSPECTIVE.



OPRE Duke | CENTER for CHILD and FAMILY POLICY

ABADA Advisory Board on Alcoholism and Drug Abuse

AMHB Alaska Mental Health Board

Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

ABADA Advisory Board on Alcoholism and Drug Abuse
AMHB Alaska Mental Health Board

Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

ABADA Advisory Board on Alcoholism and Drug Abuse
AMHB Alaska Mental Health Board

SEVEN KEY PRINCIPLES OF SELF-REGULATION

SELF-REGULATION:

- serves as the foundation for lifelong functioning
- is defined from an applied perspective as the act of managing cognition and emotion
- enactment is influenced by a combination of individual and external factors
- can be strengthened and taught
- is dependent on "co-regulation" provided by parents or other caregiving adults
- can be disrupted by prolonged or pronounced stress and adversity including poverty and trauma experiences
- develops over an extended period from birth through young adulthood and beyond

ABADA Advisory Board on Alcoholism and Drug Abuse
AMHB Alaska Mental Health Board

Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Self Regulation serves as the foundation for lifelong functioning across a wide range of domains, from mental health and emotional wellbeing to academic achievement, physical health, and socioeconomic success. It has also proven responsive to intervention, making it a powerful target for change.

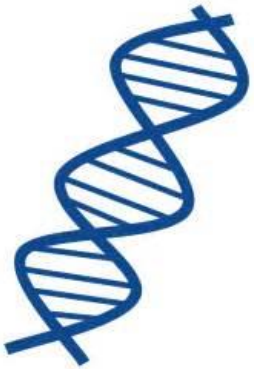
Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Self-regulation is defined from an applied perspective as the act of managing cognition and emotion to enable goal-directed actions such as organizing behavior, controlling impulses, and solving problems constructively.

Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

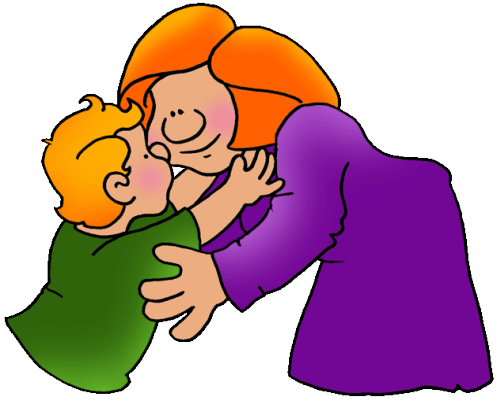
ABADA Advisory Board on Alcoholism and Drug Abuse
AMHB Alaska Mental Health Board

Self-regulation enactment is influenced by a combination of individual and external factors including biology, skills, motivation, caregiver support, and environmental context. These factors interact with one another to support self-regulation and create opportunities for intervention.



Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Self-regulation can be strengthened and taught, with focused attention, support, and practice opportunities provided across contexts. Skills that are not developed early on can be acquired later, with multiple opportunities for intervention.



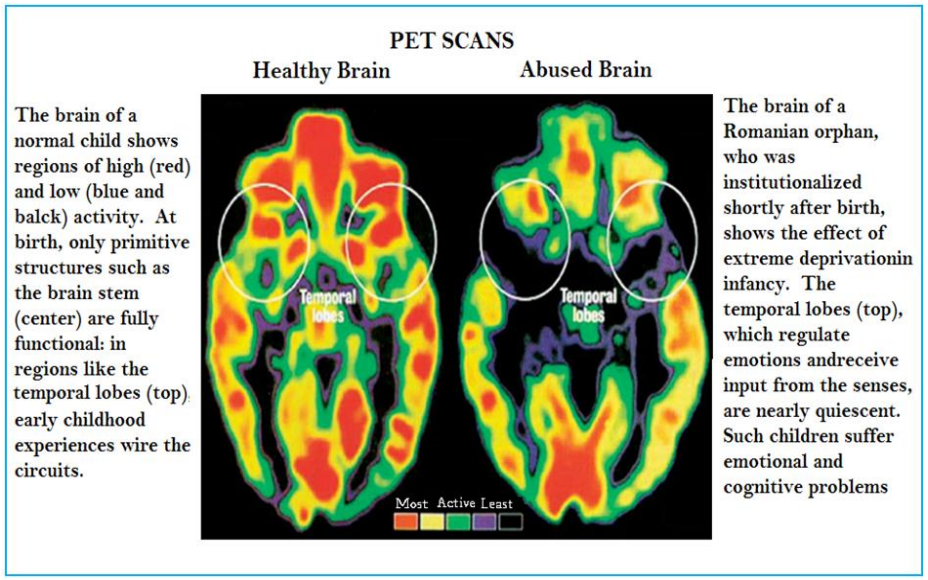
Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

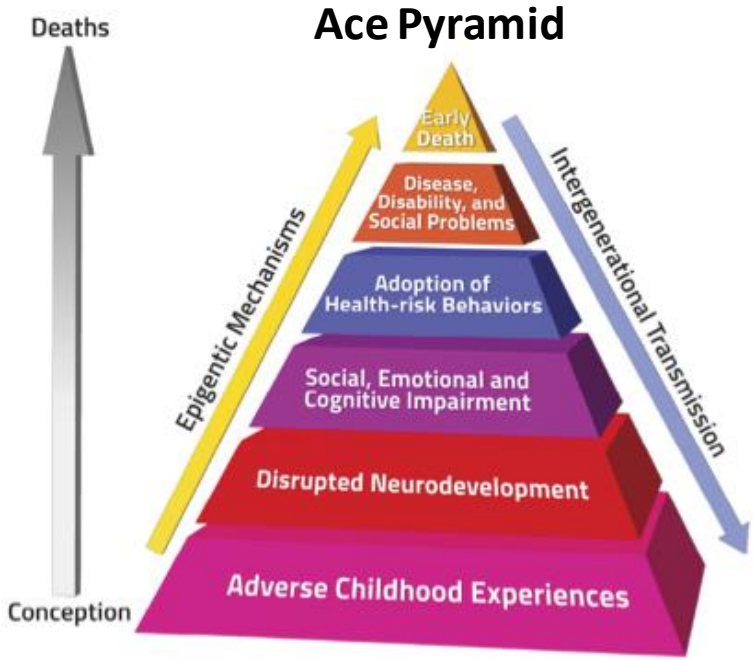
ABADA Advisory Board on Alcoholism and Drug Abuse
AMHB Alaska Mental Health Board

Development of self-regulation is dependent on "co-regulation" provided by parents or other caregiving adults through warm and responsive interactions in which support, coaching, and modeling are provided to facilitate a child's ability to understand, express, and modulate thoughts, feelings, and behavior.

Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Self-regulation can be disrupted by prolonged or pronounced stress and adversity including poverty and trauma experiences. Although manageable stress may build coping skills, stress that overwhelms children's skills or support can create toxic effects that negatively impact development and produce long-term changes in neurobiology.





Graphic Curtesy of Rob Anda, MD, MS

ABADA Advisory Board on Alcoholism and Drug Abuse
AMHB Alaska Mental Health Board

Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

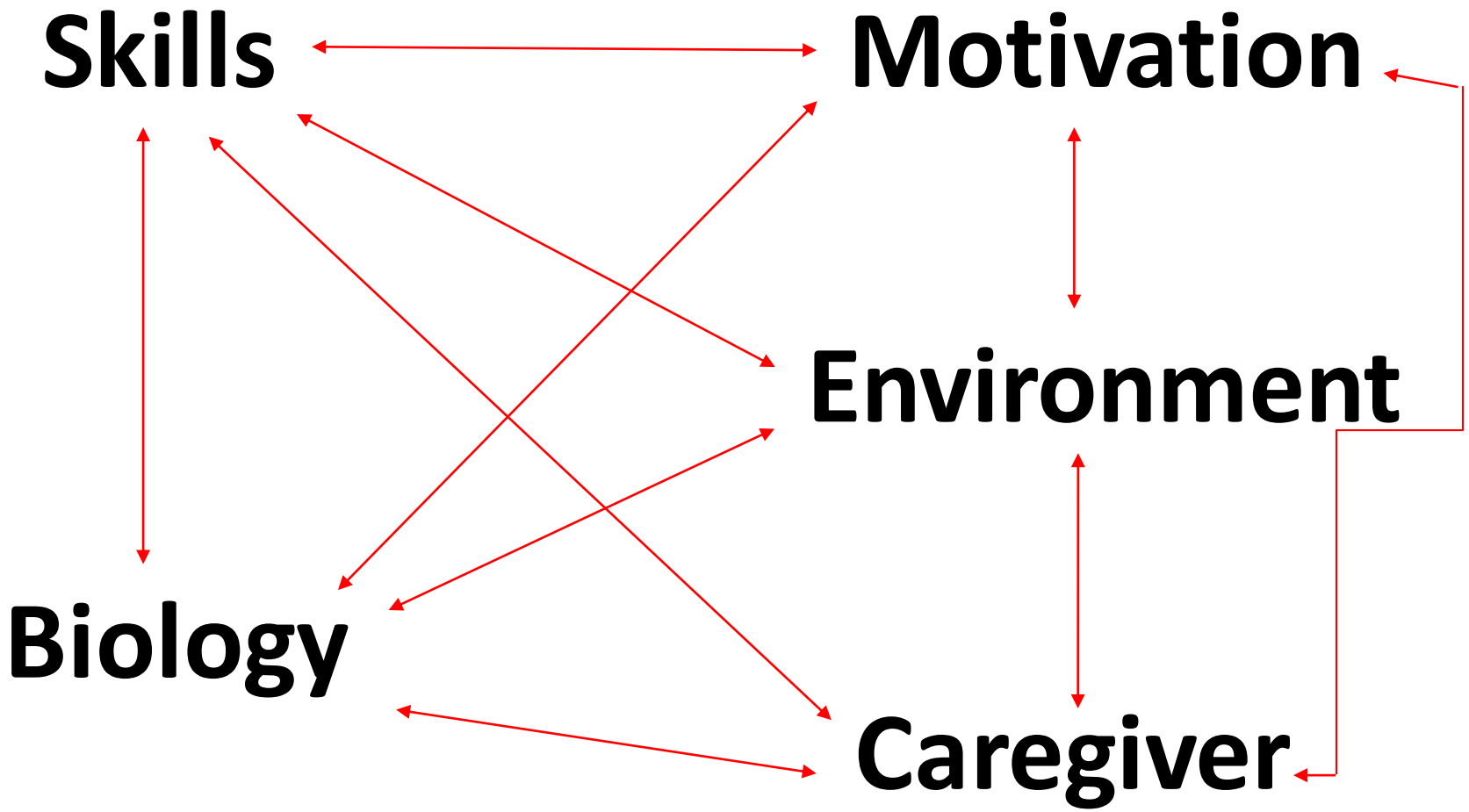
Self-regulation develops over an extended period from birth through young adulthood (and beyond). There are two clear developmental periods where self-regulation skills increase dramatically due to underlying neurobiological changes– early childhood and adolescence – suggesting particular opportunities for intervention.

ABADA Advisory Board on Alcoholism and Drug Abuse

AMHB Alaska Mental Health Board

Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

UNDERSTANDING SELF-REGULATION IN CONTEXT

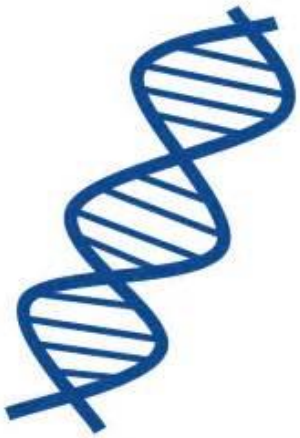


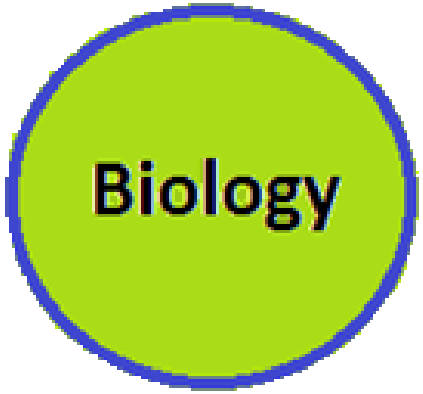
Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

ABADA Advisory Board on Alcoholism and Drug Abuse
AMHB Alaska Mental Health Board

Biology

The most internal factor influencing a child's capacity for self-regulation is comprised of the child's *biology, genetics, and temperament*, which contribute to individual differences in self-regulation.

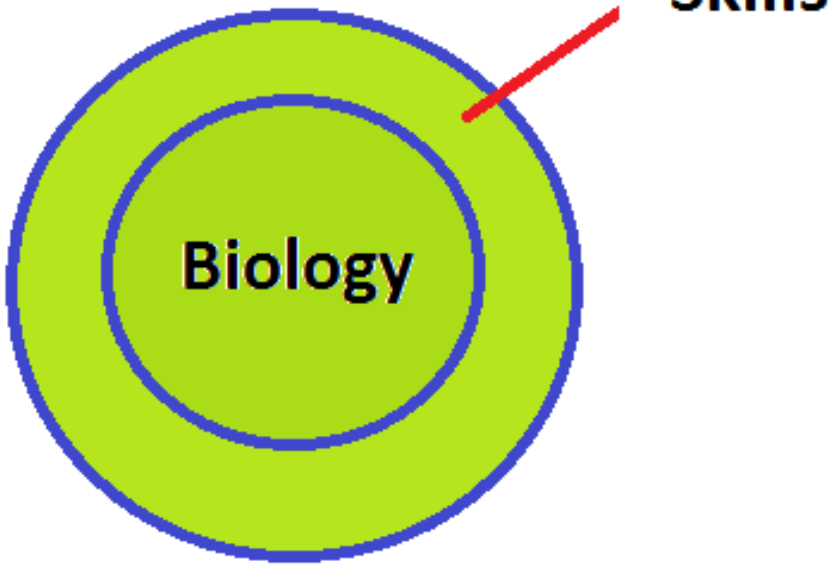




Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Skills

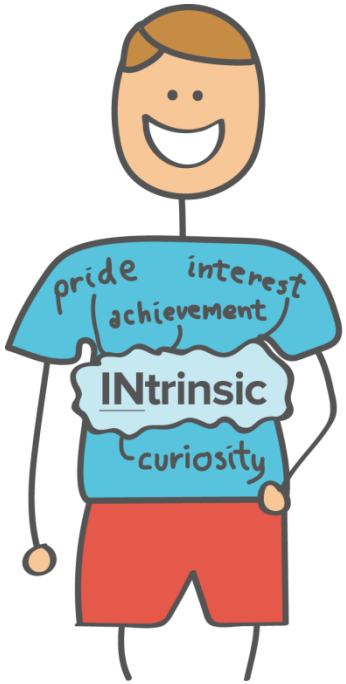
The next major influence depicted is the *self-regulation skills* that the child or youth has developed over time, which have often served as a target for interventions.

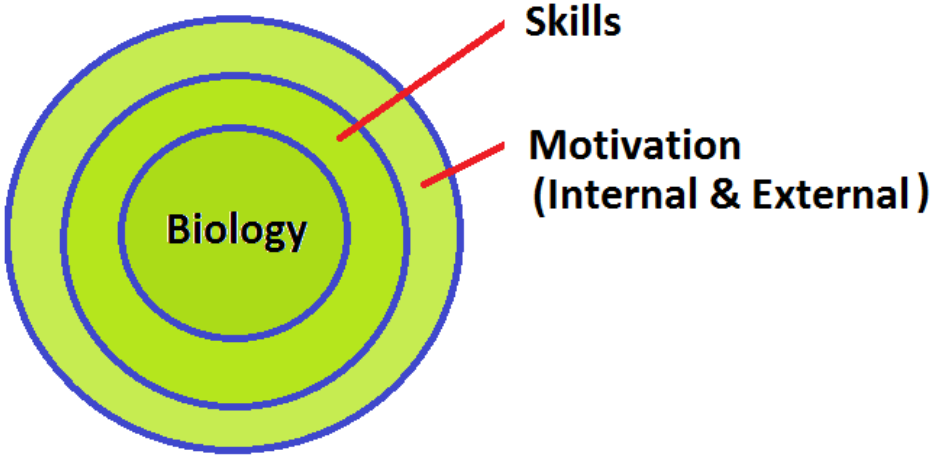


Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Motivation

Next is an individual's *motivation* to self-regulate, which can be derived from either external sources (i.e., rewards and consequences) or internal goals and values (i.e. intrinsic motivation).

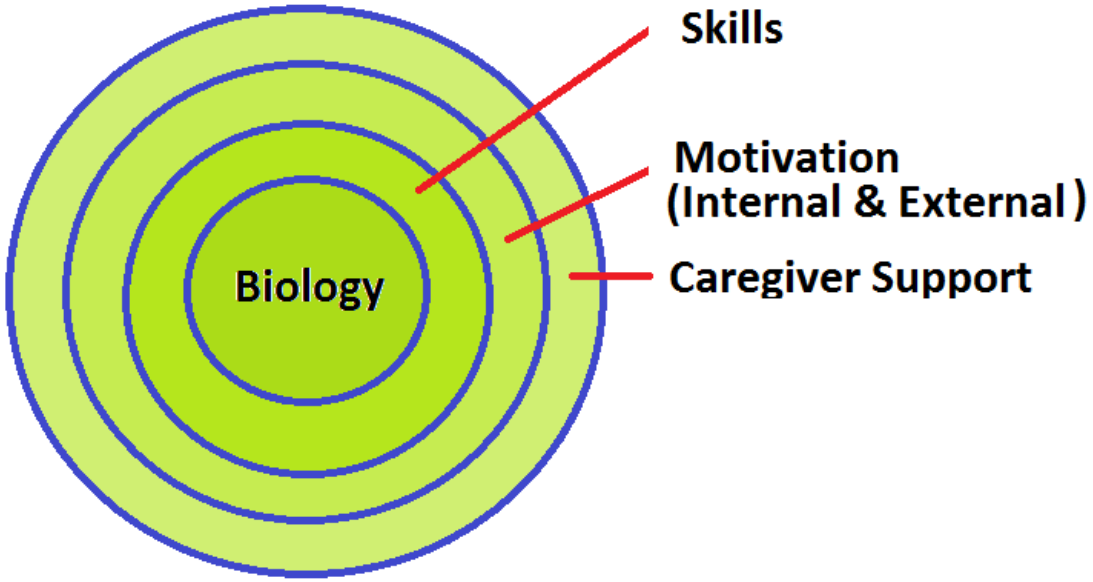




Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Caregiver Support

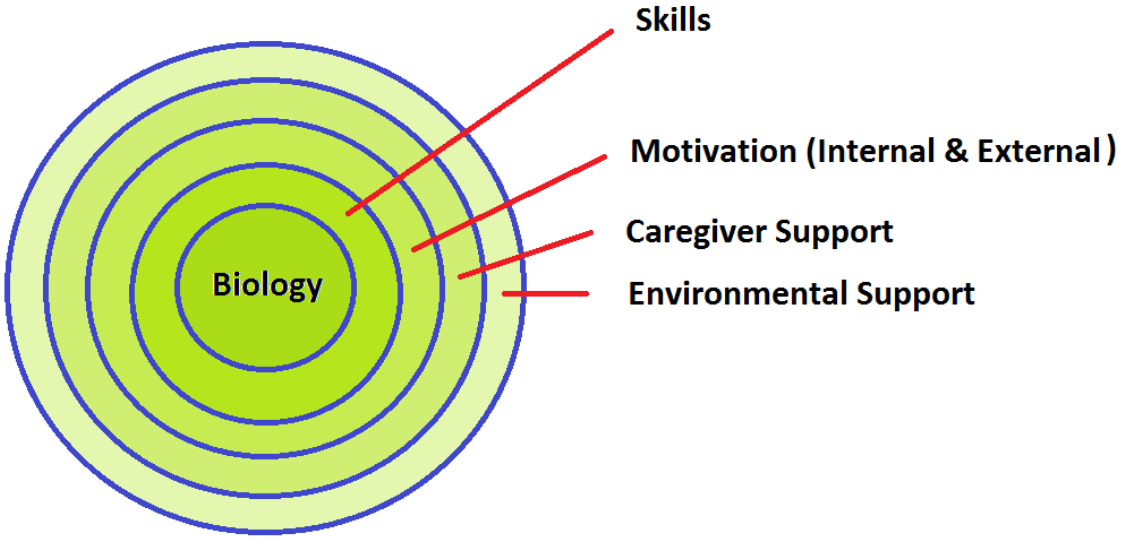
Caregiver support **(provided by parents, teachers, or mentors) is the next layer in our model, which serves to strengthen children's self-regulation skills and also buffer them from adverse experiences in the larger environment.**



Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Environmental Context

The *environmental context* including the demands or stressors placed on children as well as the external resources available also have a significant influence on their ability to self-regulate.

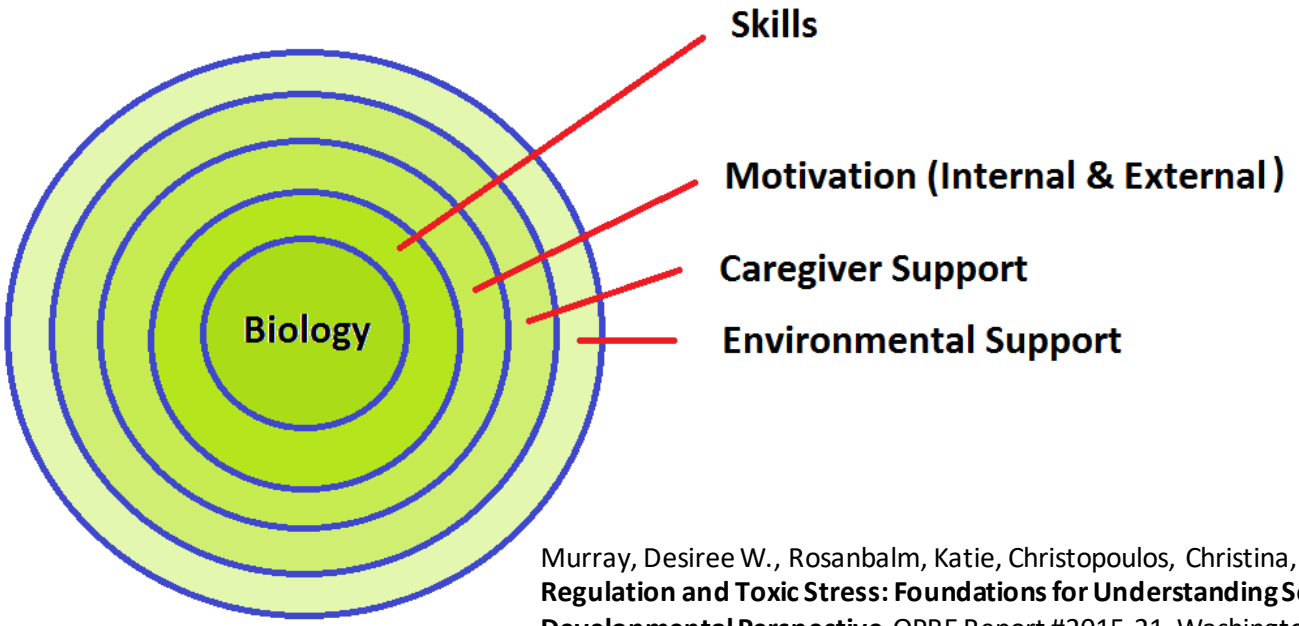


ABADA Advisory Board on Alcoholism and Drug Abuse
AMHB Alaska Mental Health Board

Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

UNDERSTANDING SELF-REGULATION IN CONTEXT

It should be noted that, although the concentric circles begin with those factors that are most internal and extend outward to those that are most external, each of these factors may interact with and influence the others. For example, environment may influence a child's biology by shaping brain circuitry, and biology or temperament may influence how a caregiver interacts with a child.



Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). **Self-Regulation and Toxic Stress: Foundations for Understanding Self-Regulation from an Applied Developmental Perspective**. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

The Resource

Seven Key Principles of Self-Regulation and Self Regulation in Context

This brief provides a framework for understanding self-regulation and its development in an ecological-biological development context. It is derived from a larger report on work conducted by the Duke Center for Child and Family Policy for the Administration for Children and Families.

Many different terms have been used to describe one's ability to manage emotions and impulses. Figure 1 illustrates self-regulation as an umbrella term that encompasses many constructs that may be used to describe similar skills and processes.

SEVEN KEY PRINCIPLES OF SELF-REGULATION

1. **Self regulation serves as the foundation for lifelong functioning** across a wide range of domains, from mental health and emotional wellbeing to academic achievement, physical health, and socioeconomic success. It has also proven responsive to intervention, making it a powerful target for change.

2. **Self regulation is defined from an applied perspective as the act of managing cognition and emotion** to enable goal-directed actions such as organizing behavior, controlling impulses, and solving problems constructively.

3. **Self regulation enactment is influenced by a combination of individual and external factors** including biology, skills, motivation, caregiver support, and environmental context. These factors interact with one another to support self-regulation and create opportunities for intervention.

Figure 1

OPRE Duke | CENTER for CHILD and FAMILY POLICY

4. **Self-regulation can be strengthened and taught like literacy**, with focused attention, support, and practice opportunities provided across contexts. Skills that are not developed early on can be acquired later, with multiple opportunities for intervention.

5. **Development of self-regulation is dependent on "co-regulation" provided by parents or other caregiving adults** through warm and responsive interactions in which support, coaching, and modeling are provided to facilitate a child's ability to understand, express, and modulate thoughts, feelings, and behavior.

6. **Self-regulation can be disrupted by prolonged or pronounced stress and adversity including poverty and trauma experiences.** Although manageable stress may build coping skills, stress that overwhelms children's skills or support can create toxic effects that negatively impact development and produce long-term changes in neurobiology.

7. **Self-regulation develops over an extended period from birth through young adulthood** (and beyond). There are two clear developmental periods where self-regulation skills increase dramatically due to underlying neurobiological changes– early childhood and adolescence – suggesting particular opportunities for intervention.

UNDERSTANDING SELF-REGULATION IN CONTEXT

Figure 2 presents a comprehensive model of self-regulation enactment which graphically shows the range of factors that influence whether and how well a child or youth may self-regulate in any given situation.

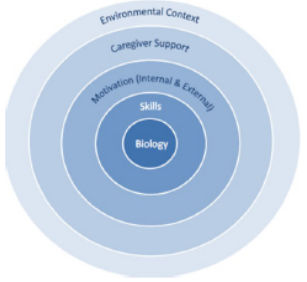


Figure 2

The most internal factor influencing a child's capacity for self-regulation is comprised of the child's *biology, genetics, and temperament*, which contribute to individual differences in self-regulation.

The next major influence depicted is the *self-regulation skills* that the child or youth has developed over time, which have often served as a target for interventions. Next is an individual's *motivation* to self-regulate, which can be derived from either external sources (i.e., rewards and consequences) or internal goals and values (i.e. intrinsic motivation).

https://www.acf.hhs.gov/sites/default/files/opre/srts_7_principles_brief_revised_2_15_2017_b508.pdf