

Developmental Neuroscience and Adolescent Sexual Health: Emotion

Adolescence is a period of remarkable physical, cognitive, social and emotional changes that impact behaviors, relationships and health. Promising research from the field of developmental neuroscience on changes occurring in the social-emotional processes in the adolescent brain provides opportunities for educators, applied researchers and program developers to bridge from these new scientific advances to the improvement of young people's sexual health and relationships.

WHAT THE DEVELOPMENTAL NEUROSCIENCE SAYS

Important developmental changes in the social-emotional and cognitive control regions of the brain lead to an intensification of emotional and social learning at the time of puberty. Despite common misconceptions about the developing brain, adolescents, like adults, are capable of effectively weighing the pros and cons of risk-taking behaviors and making rational decisions. However, in situations that trigger excitement or fear and heighten intense emotions – particularly in the presence of peers – young people are more inclined than adults to make choices that may favor social and emotional rewards at the expense of their health and well-being.



For example, when faced with a request to engage in sexting particularly for the first time, young people weigh the potential consequences against the immediate benefits or rewards. Immediate benefits, such as enhanced social status from peers or the thrill of engaging in a novel, slightly scary experience, may drive young people to engage in this potentially risky behavior, even when, cognitively, they understand the potential risks such as loss of privacy, public humiliation or threats to their reputation.

WHY EMOTION IS IMPORTANT FOR ADOLESCENT SEXUAL HEALTH

Adolescent decision-making is more likely to be motivated by emotions and feelings in social situations that produce excitement or novelty, including in the context of romantic and sexual relationships. However, many of the behavior change models used in existing sexual health programs emphasize

cognitive processes (for example, how to assess and avoid risk) and de-emphasize the role of emotions in relationships and sexual decision-making.

The human brain is shaped by experience. The process of trying new things, learning from them, and even failing, is an essential part of development and learning new skills. Just like an infant learning to walk, learning to engage in complex social relationships, such as those involved in romantic and sexual relationships, requires repeated practice and opportunities to learn from failures and experiences. The changes occurring in the adolescent brain around the time of puberty facilitate adolescents' motivations to practice decision-making while navigating emotions, social interactions and relationships. It is no coincidence that these are also the skills young people say they want to learn about in sex and relationship education. Yet, the context of sexual health programs often does not allow opportunities for youth to experience and reflect upon behaviors that are influenced by emotion and social reward.

By drawing on the social and emotional aspects of decision-making, we can address issues that are most important to young people, including choices about relationships and sex, while leveraging the natural developmental changes in the brain to increase motivation to engage in health-promoting behaviors. Given these important findings, three key questions have emerged as areas for exploration in the sexual health field:

KEY QUESTIONS

- Q:** What are the emotional and cognitive learning goals in adolescent sexual health programs?
- Q:** How do we integrate opportunities for young people to experience and reflect on emotions and emotional influences in sexual health programs?
- Q:** In what ways can we extend skill practice in program settings to prepare young people for using decision-making skills in real-world, emotionally-heightened contexts?

WHAT THE SEXUAL HEALTH FIELD CAN DO

Educators and Youth Workers

- Acknowledge the role of emotions in decision-making early in the transition from childhood to adolescence. The goal is not for young people to avoid emotions, but instead to help them learn how to respond in emotionally-charged situations and support learning about decision-making in the context of strong feelings.
- Encourage healthy, positive and developmentally-appropriate risk-taking in adolescence that elicits novelty and excitement, and satisfies an adolescent's need to push boundaries like sports, theater, community service, experiential learning, or public speaking.
- Encourage young people to reflect on their emotions after decision-making. The diversity of youth trajectories and experiences means we may not know how emotions will impact decisions, but we can help teens reflect on how feelings influenced their past choices and create a plan for the next time they experience intense emotions.

Applied Researchers and Program Developers

- Shift from a risk-avoidance framework to a model that promotes sexual health in the context of normal adolescent development.
- Develop instructional strategies that mimic high-intensity environments in program settings so that young people can practice making decisions in novel and exciting situations.
- Identify strategies that capitalize on youth's passions to encourage positive choices. Young people are more likely to choose health-promoting behaviors when they are motivated by something they feel strongly about, such as issues of social justice.
- Develop role-play scenarios that encourage teens to explore the role of emotion in decision-making in complex social situations. Test the authenticity and relevance of role-playing scenarios for skill building with diverse groups of teens.

DEFINITIONS

Cognitive processes: brain functions associated with the pre-frontal cortex, such as working memory, self-inhibition, performance and feedback learning, and relational reasoning.

Social-emotional processes: brain functions that influence adolescents' capacity to experience emotions and empathy and navigate social situations, including acceptance and rejection.

Emotional regulation: the ability to effectively respond to an emotional experience in a socially acceptable manner, either by permitting or delaying reactions.

Impulse control: the ability to modify attention, emotion and behavior in service of long-term goals.

Novelty: an experience that is new, original and/or different than the usual.

READING LIST

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KIRBY SUMMIT

To honor ETR scientist Dr. Douglas B. Kirby for his lifetime contributions to the field, ETR and its partners created an invited summit - known as the Kirby Summit - to foster collective dialogue on current research, promising interventions, and the role of policy to promote the sexual and reproductive health of young people. The 2017 Kirby Summit brought together a transdisciplinary group of experts to explore how findings from developmental neuroscience can translate into adolescent health programs and policies.



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