

Finding **RESILIENCE** in Sports, Play & Recreation

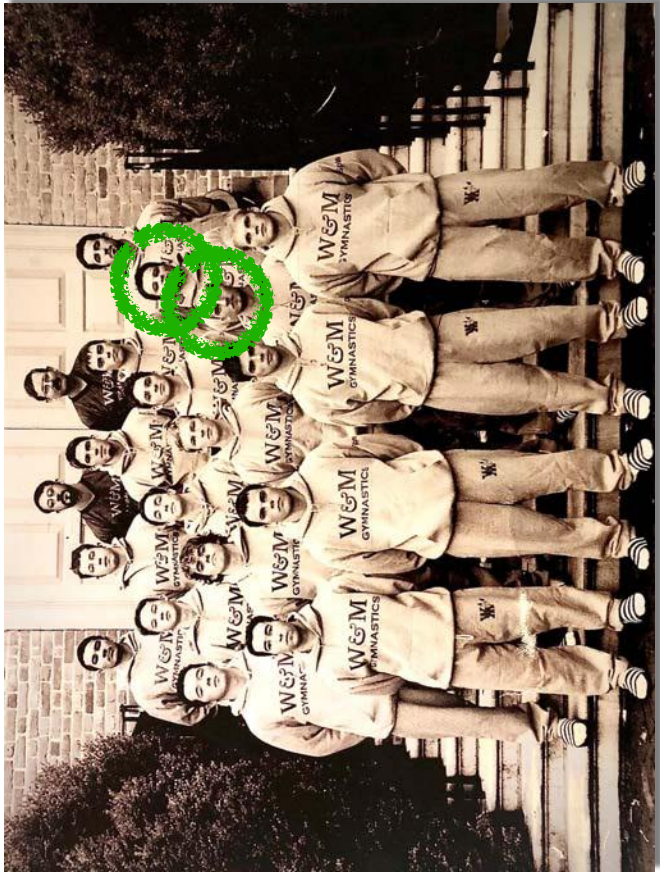


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Division of Adolescent Medicine

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Children's Hospital of Philadelphia



2002



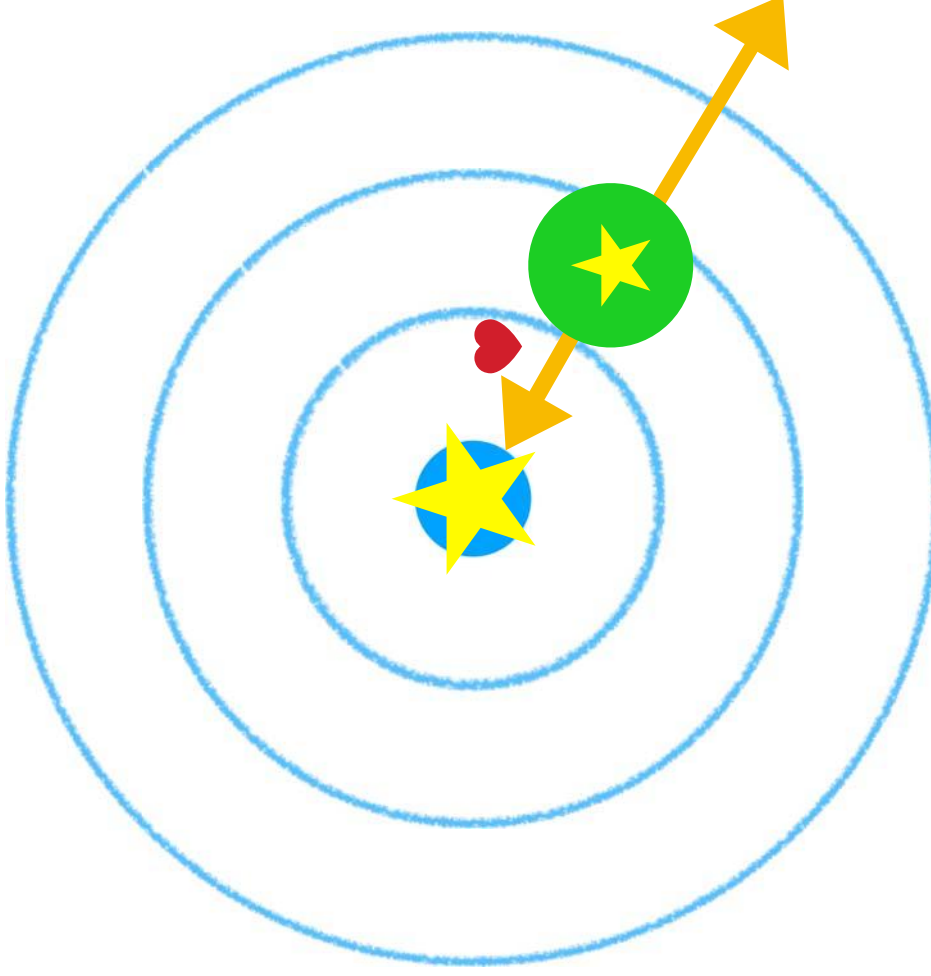
2020

Resilience 101

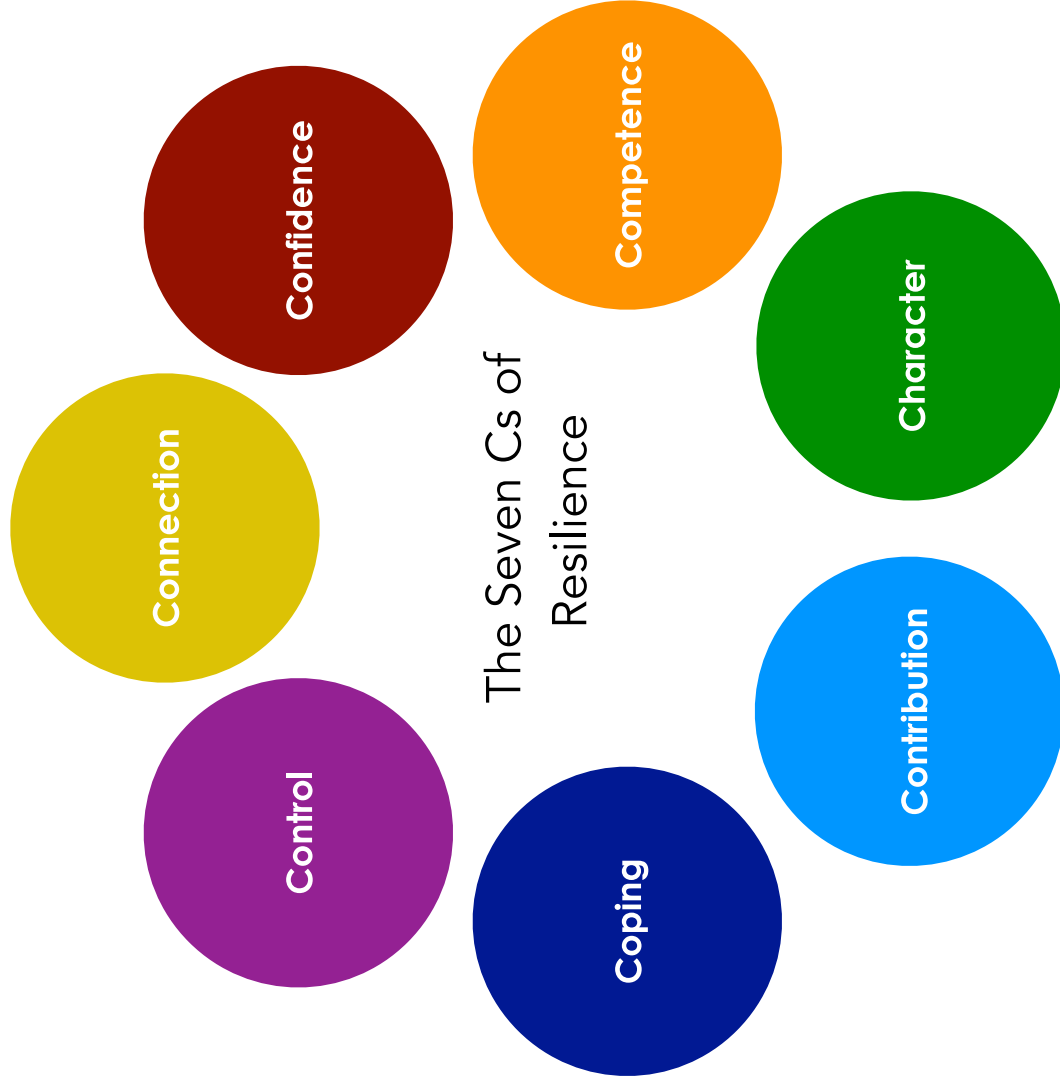
Resilience is a capacity



Resilience 101



Adapted from Ungar M. "Practitioner Review: Diagnosing Childhood Resilience - a systematic approach to the diagnosis of adaptation in adverse social and physical ecologies." *J. Child Psychology and Psychiatry*. 2015.



Adapted from Ginsburg & Jablo, Building Resilience in Children and Teens, 3rd Ed. 2015.
The 7Cs model builds on work by Little et al. and Eccles & Gootman.



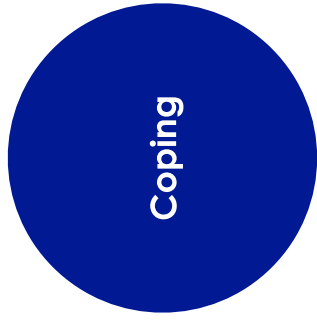
Our Ancient Biology



Copyright: Dirk Freder, iStockphoto



The most powerful way to escape from a **Tiger** is to **Run**





Addressing Adversity

Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults

The Adverse Childhood Experiences (ACE) Study

Vincent J. Felitti, MD, FACP, Robert F. Anda, MD, MS, Dale Nordenberg, MD, David F. Williamson, MS, PhD, Alison M. Spitz, MS, MPH, Valerie Edwards, BA, Mary P. Koss, PhD, James S. Marks, MD, MPH

Am J Prev Med 1998;14(4)

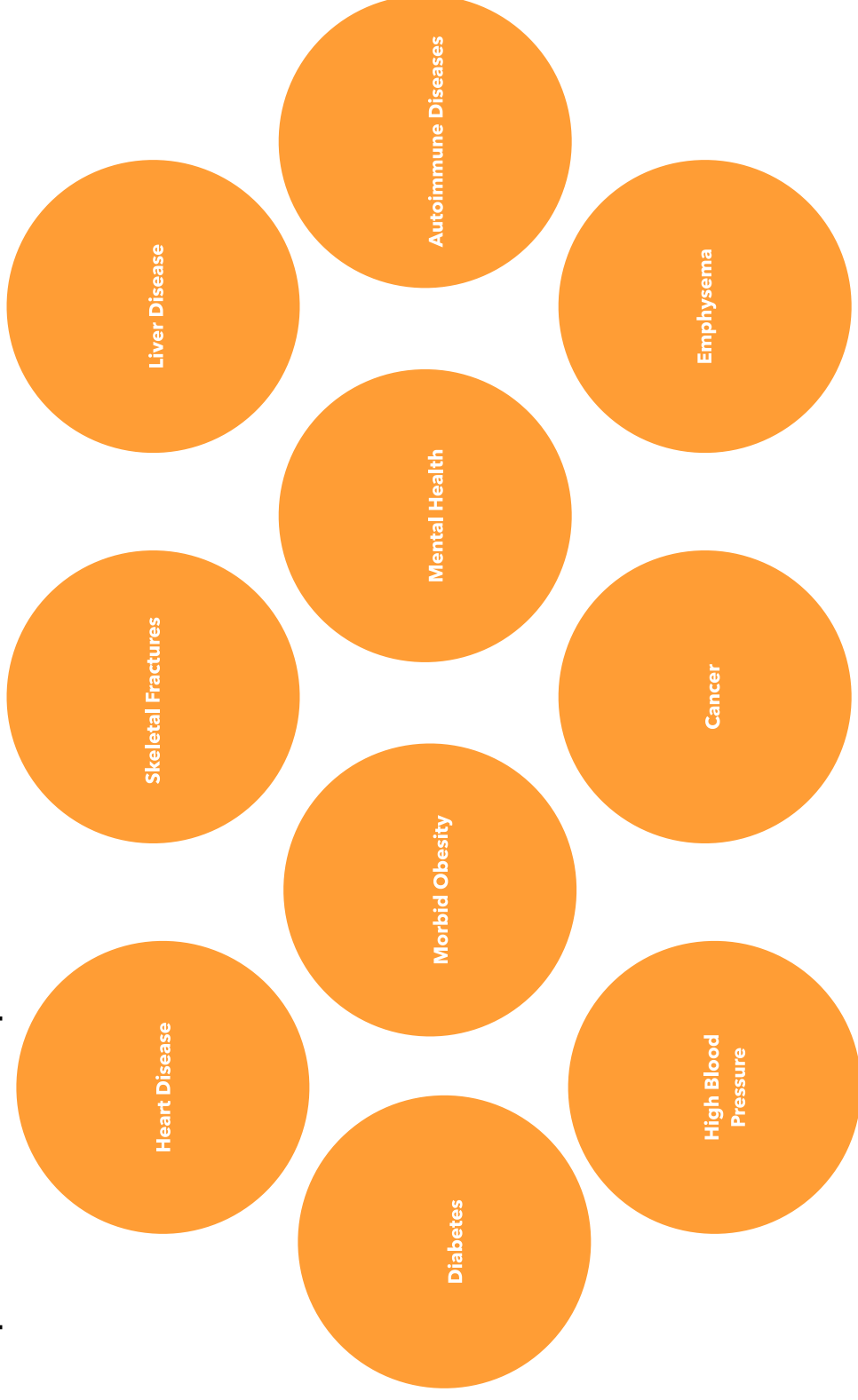
© 1998 American Journal of Preventive Medicine

0749-3797/98/\$19.00

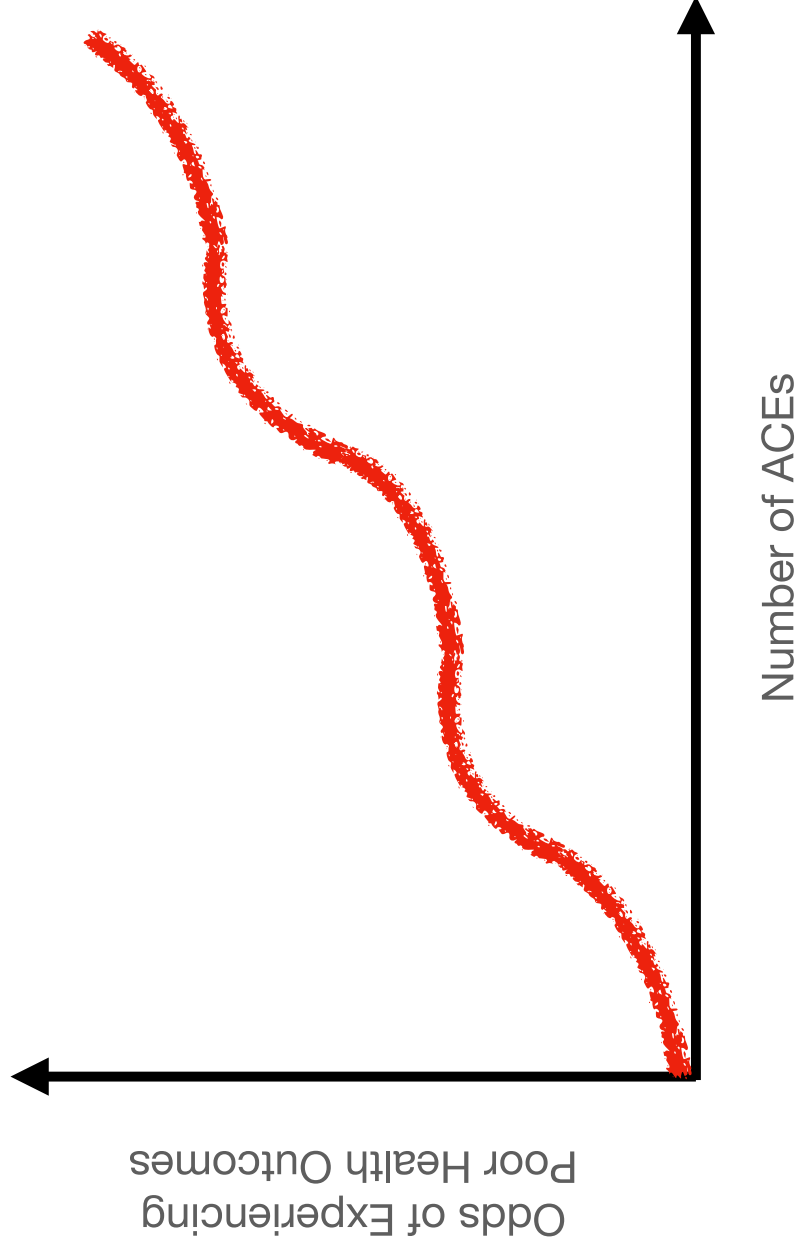
PII S0749-3797(98)00017-8

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Childhood adversity increases the risk of experiencing poor health outcomes throughout life



The impact of childhood adversity is dose-dependent



The first signs of adversity's influence can be seen in
childhood and adolescence

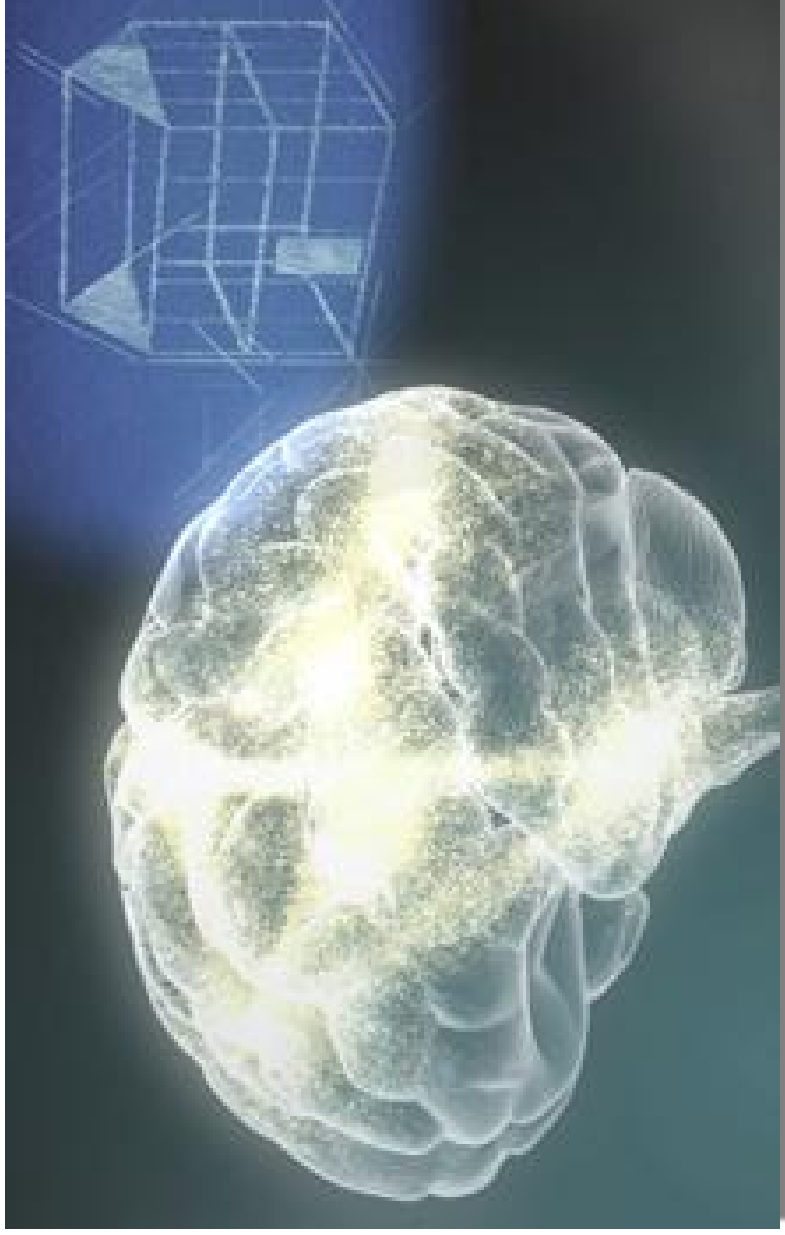
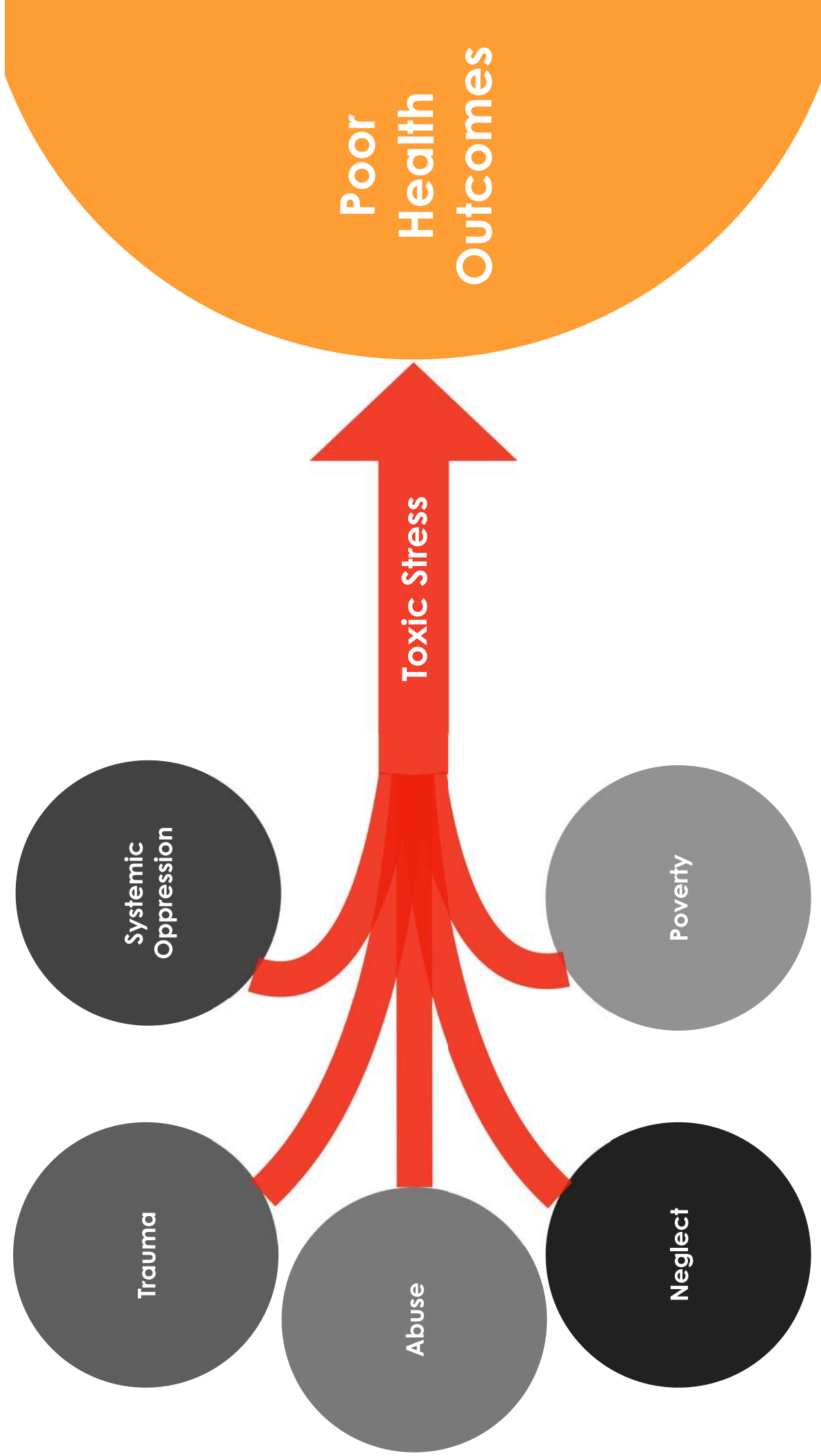
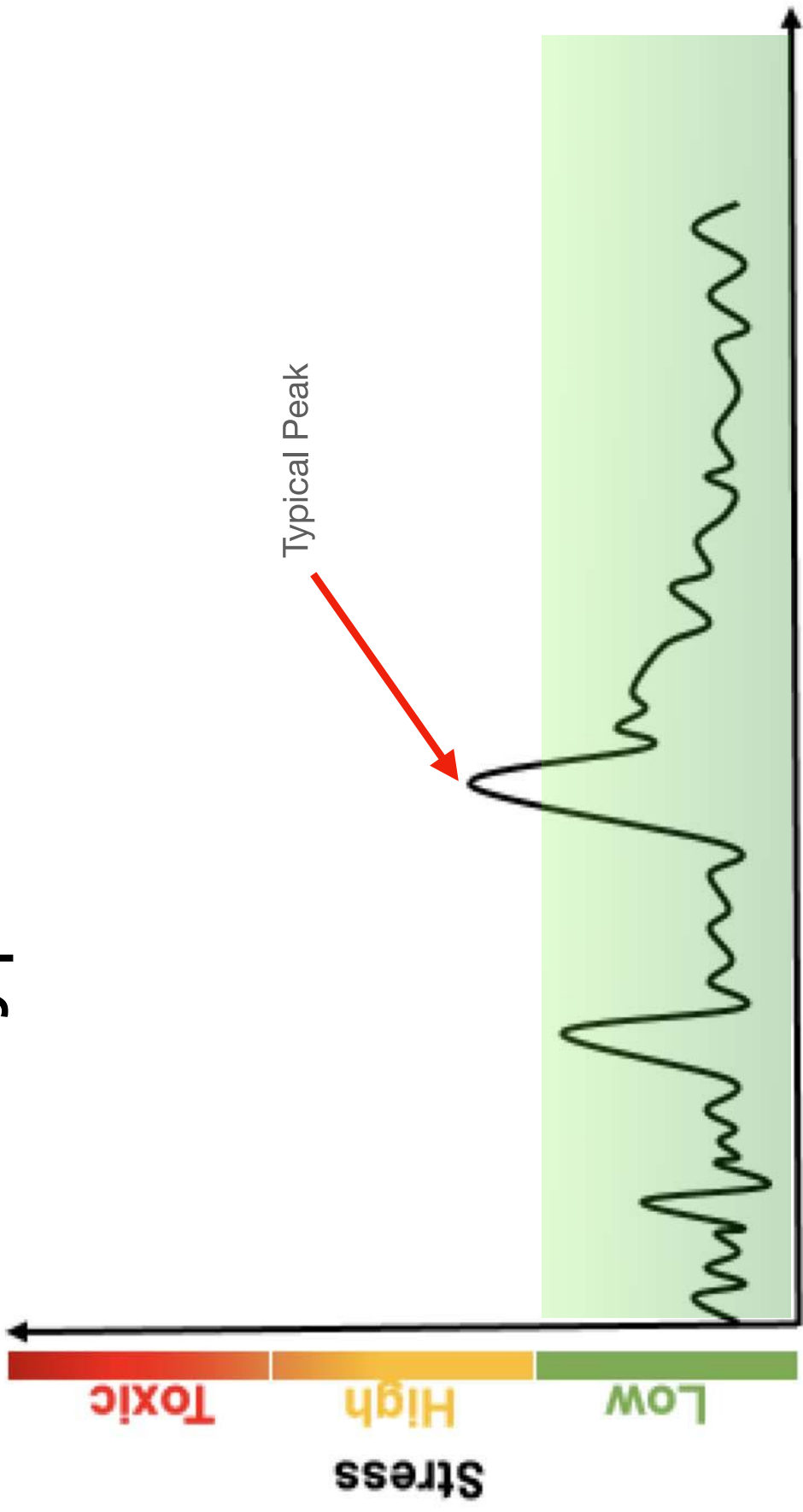


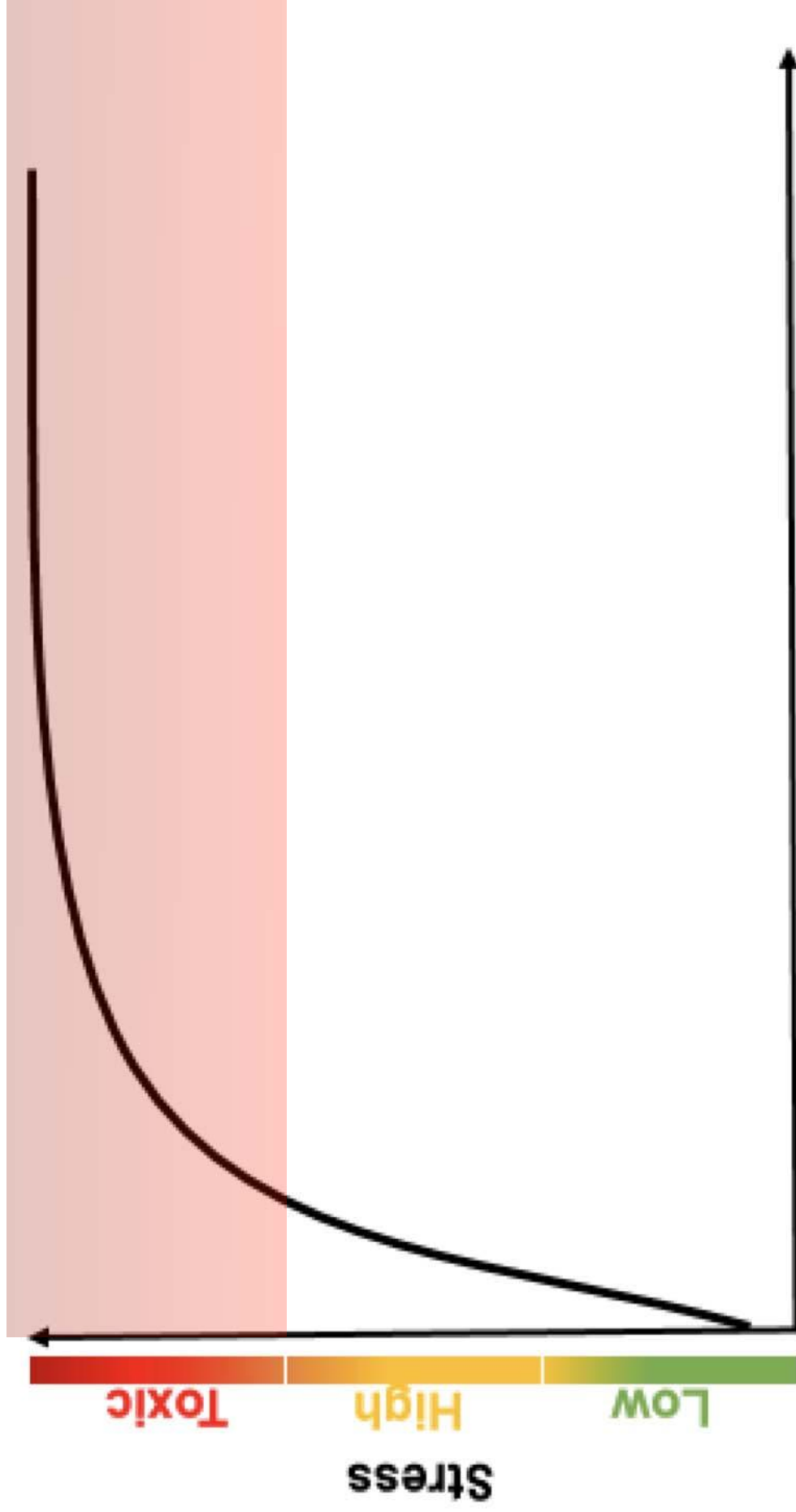
Image credit: Center on the Developing Child, Harvard University



Typical Stress



Toxic Stress



Levels of Influence

Stress Hormone Axis

Epigenetic Code

Inflammatory, Immune, and Metabolic Systems

Brain Development & Function

“This kid cannot keep still and won’t pay attention”

“Things go in one ear and out the other!”

“It doesn’t take anything to set them off!”

“That kid really going to hurt someone...”

“They’re just looking for trouble”

“They have ADD, ODD, Conduct Disorder, Bipolar Disorder...”

“That kid is a loner.”

“She’s an open book... and she is sharing way too much!”

“This one just keeps zoning out.”

“He’s a pathological liar!”

“She lies all the time, even when it’s obvious she’ll get caught.”

“Nothing bothers this kid.”

“This kid always has a bellyache, headache, is too tired...”

“This kid smokes... does drugs...cuts”



Trauma-Sensitive Practice

- Knowing what is about us and what is not about us.
- Changing the lens with which we view behavior from “What is wrong with you?” to “What happened to you?”
- Seeing people as they deserve to be seen, not according to labels they’ve received or behaviors they’ve displayed
- Returning control to those from whom it has been taken away.

Wade R, Miller E “Trauma-Sensitive Practice: Working with youth who have faced adverse childhood (or adolescent) experiences” in Reaching Teens, 2nd ed. American Academy of Pediatrics. 2020

Adversity



Toxic
Stress



Poor
Health

Unless

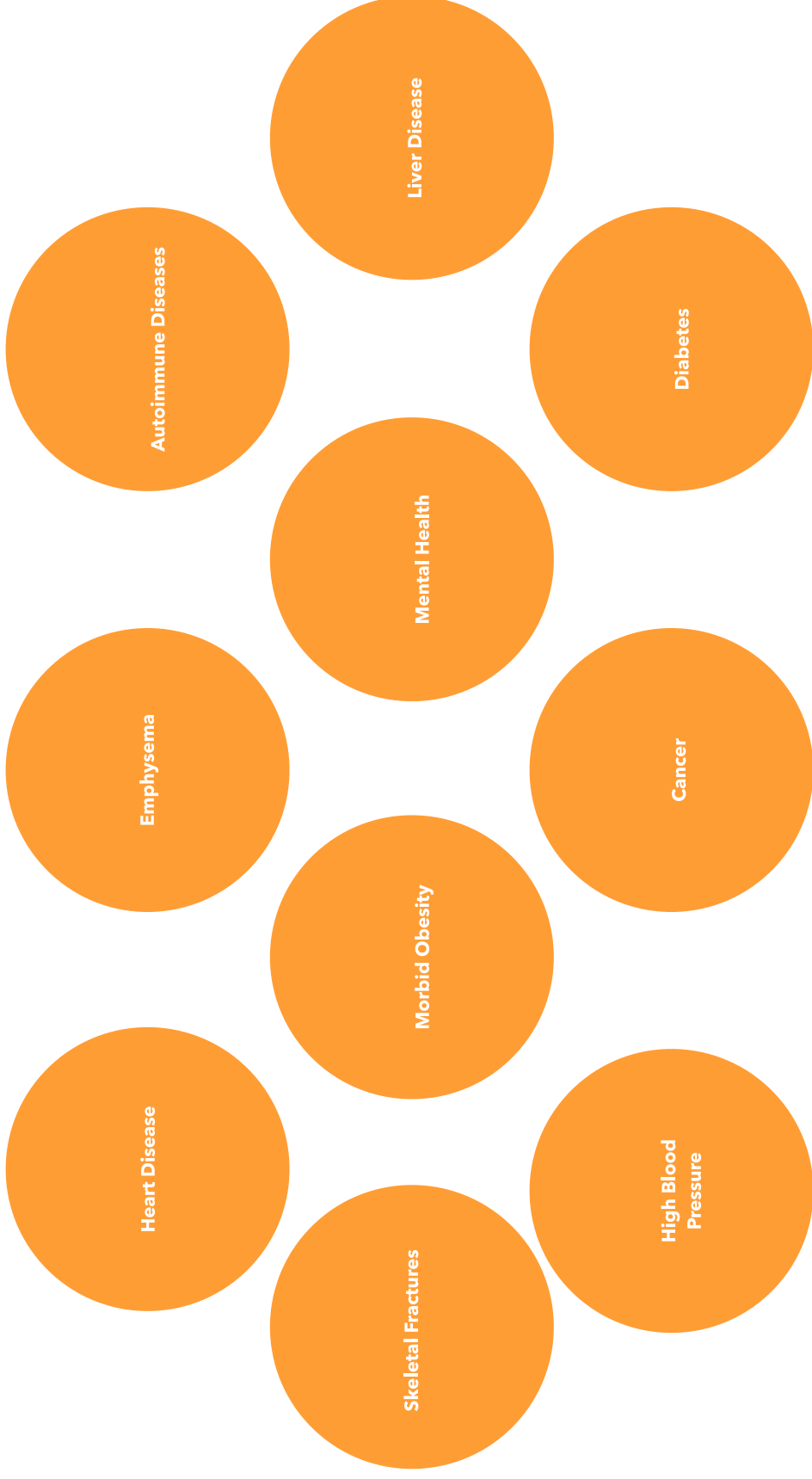


Exercise



Photo credit: Students Run Philly Style

Exercise provides protection from poor health outcomes throughout the lifespan



The impact of exercise is dose-dependent

Figure F6-2. Relationships of Moderate-to-Vigorous Physical Activity to All-Cause Mortality, with Highlighted Characteristics Common to Studies of This Type

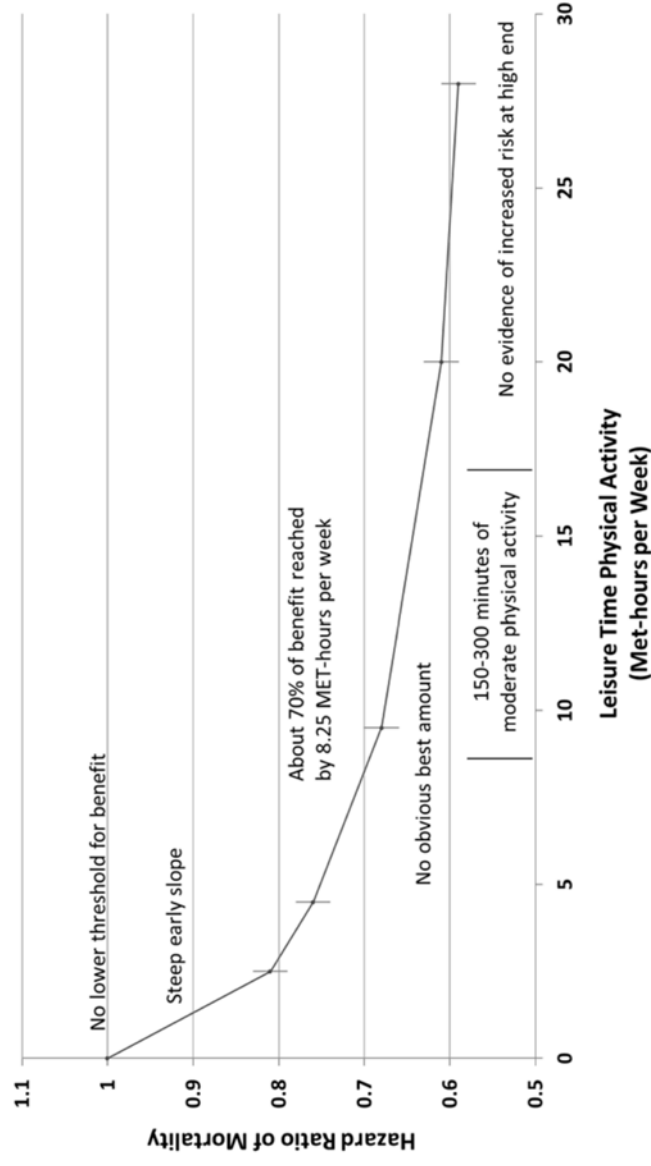


Image credit: U.S. Department of Health and Human Services, 2018 Physical Activity Guidelines Committee Scientific Report

The benefits of exercise are available to young people.

The New York Times

THE CHECKUP

The Benefits of Exercise for Children's Mental Health

Even light physical activity among adolescents was linked to better mental health as they got older, new research shows.



istock by Getty Images

By Perri Klass, M.D.

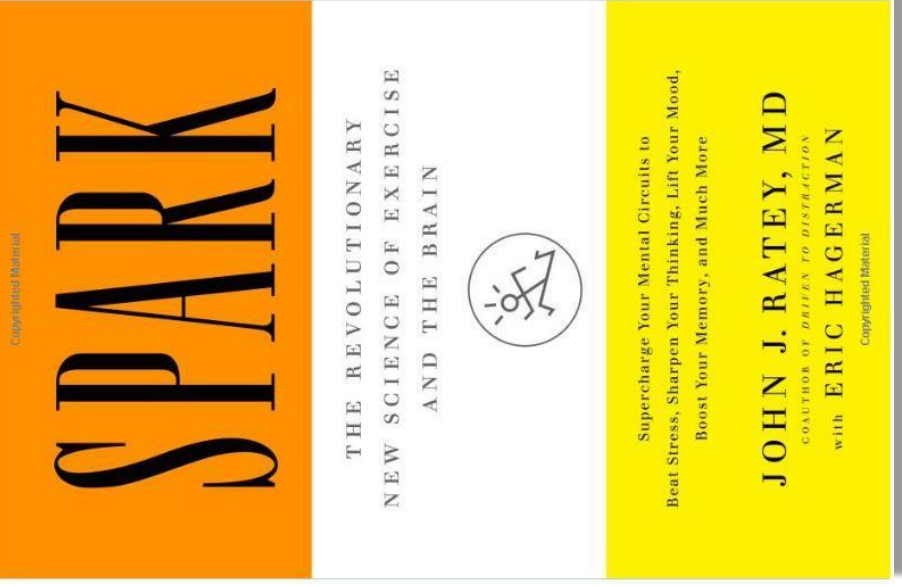
Levels of Influence

Stress Hormone Axis

Epigenetic Code

Inflammatory, Immune, and Metabolic Systems

Brain Development & Function



Spark: The Revolutionary New Science of Exercise and the Brain.

John J. Ratey, M.D.

Little, Brown and Company. 2008.



Change in Measures of Toxic Stress and Resilience Among Youth Participants in a Running and Mentorship Program, and its Association with Adverse Childhood Experiences

Christopher B. Renjilian, M.D., M.B.E., Victoria Miller Ph.D., Kenneth Ginsburg, M.D., M.S.Ed.



PURPOSE

Primary Aim: Evaluate for change in markers of toxic stress and resilience among high school youth participating in a running and mentorship program.

Secondary Aim: Evaluate whether observed changes differed across subgroups of youth with varying levels of exposure to adverse childhood experiences (ACEs).

METHODS

Anonymous questionnaires were administered during the first (baseline) and final (follow-up) months of the eight month program. ACE scores were assessed at baseline. The possible range of ACE scores was 0-10. Measures of depression (PHQ8), anxiety (GAD7), and grit (Grit-S) were obtained at baseline and follow-up. The range of possible scores for each measure was: PHQ8: 0-24, GAD7: 0-21, Grit-S: 1-5. Baseline and follow-up surveys were linked by unique identifiers.

Primary Aim: Paired-samples t-test was used to evaluate whether there was a significant difference between baseline and follow up scores for PHQ8, GAD7 and Grit-S.

Secondary Aim: One-way ANOVA with post-hoc analysis was used to compare the change in PHQ8, GAD7, and Grit-S scores from baseline to follow up across four subgroups of youth with different levels of ACE exposure: No exposure (ACE score = 0), Mild (ACE score = 1), Moderate (ACE score = 2-3) and Severe (ACE Score = 4-10).

RESULTS

213 youth enrolled in the study. 151 completed baseline and follow up questionnaires. The mean ACE score was 1.98, and subjects were evenly distributed across ACE severity groups.

RESULTS Cont.

Primary Aim: Change from Baseline to Follow Up

- PHQ8: There was a significant decrease from baseline (mean = 6.63, SD = 4.712) to follow-up (mean = 5.61, SD = 4.838), $t(146) = 2.612$, $p = 0.010^*$.
- GAD7: There was a significant decrease from baseline (mean = 6.24, SD = 4.842) to follow-up (mean = 5.37, SD = 4.795), $t(143) = 2.360$, $p = 0.020^*$.

- Grit-S: There was a significant increase from baseline (mean = 3.46441, SD = 0.562265) to follow-up (mean = 3.56601, SD = 0.538501), $t(143) = -2.44$, $p = 0.016^*$.

Secondary Aim: Differences Between Subgroups with Varying Levels of ACE Exposure

Between subgroups, there was no statistically significant difference in the change in PHQ8, GAD7 or Grit-S scores, as determined by One-Way Anova:

- PHQ8: $F(3, 141) = 2.037$, $p = 0.111$
- GAD7: $F(3, 123) = 2.006$, $p = 0.116$
- Grit-S: $F(3, 139) = 1.944$, $p = 0.125$

Bonferroni post-hoc analyses were performed, but are not reported in detail because there were no significant differences. There were non-significant trends toward:

- Greater reductions in PHQ8 in the moderate (-2.12, 95% CI: -3.95 to -0.29) and severe (-2.36, 95% CI: -4.54 to -0.18) compared to the no (-0.31, 95% CI: -1.46 to 0.83) and mild (-0.21, 95% CI: -1.74 to 1.31) groups.
- Greater reductions in GAD7 in the moderate (-2.24, 95% CI: -4.17 to -0.31) and severe (-1.44, 95% CI: -1.62 to 0.62) compared to the no (-0.50, 95% CI: -1.62 to 0.62) and mild (0.19, 95% CI: -1.25 to 1.64) exposure groups.
- Increases in Grit-S were greatest in the no (mean = 0.2500, 95% CI: -1.032 to 0.3968), followed by the severe (0.1048, 95% CI: 0.0216 to 0.1880), moderate (0.0429, 95% CI: -0.1461 to 0.3161) and mild (-0.0066, 95% CI: -0.1412 to 0.1543) exposure groups.

CONCLUSIONS

Primary Aim: Among youth participants in a running and mentorship program, modest but significant decreases in depression and anxiety scores, and a significant increase in grit score, were observed during the study period.

Secondary Aim: No significant differences were found across subgroups of youth with different levels of ACE exposure.

SIGNIFICANCE

Programs that combine exercise and mentorship may help youth mitigate the effects of toxic stress and cultivate resilience. All youth, including those at highest risk for toxic stress due to higher levels of exposure to adversity, may be poised to benefit.

ACKNOWLEDGEMENTS

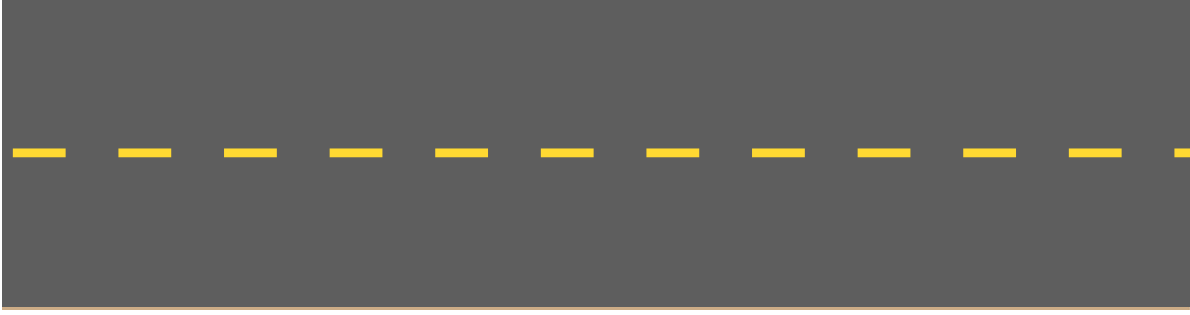
This work was supported by the Maternal & Child Health Bureau (T71MC30798), The American Medical Society for Sports Medicine and Children's Hospital of Philadelphia



This work was made possible through partnership with Students Run Philly Style. Special thanks for leadership contributions from Andrew Kucer, J.D. and Lauren Kobylarz, M.P.A.



Statistical support provided by Tryce Scully MS and Walter Faig, PhD, Children's Hospital of Philadelphia Biostatistics and Data Management Core.



Adversity

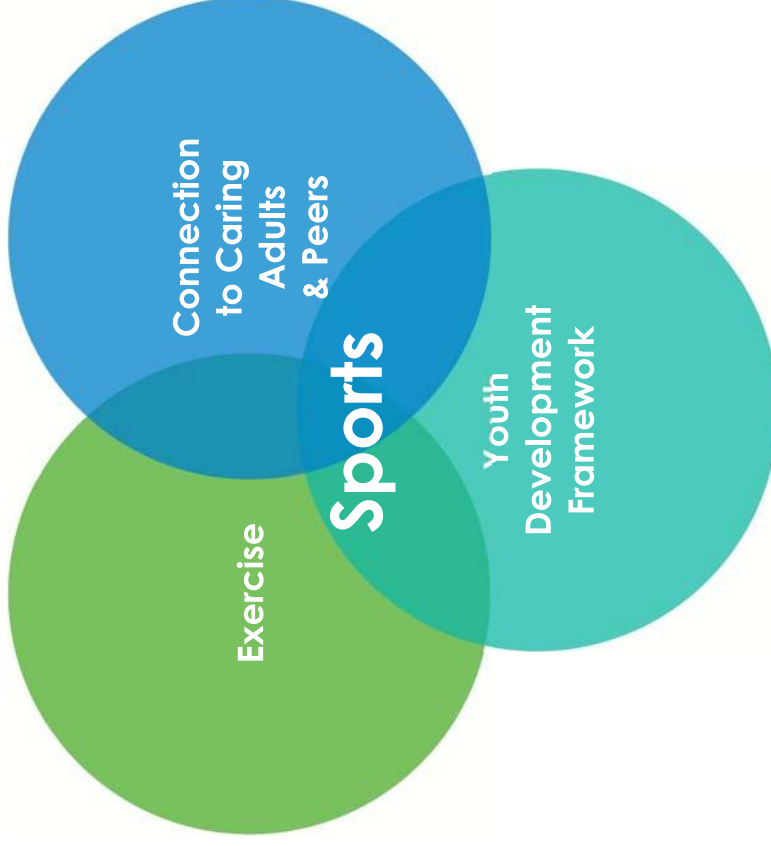


Exercise





Sports





Cultivating Connection

Connection



Jack P. Shonkoff, MD et al.
<https://developingchild.harvard.edu>

Connection



"How was your day?"

The New York Times

He Just Wanted to Play Catch. They Got Relief From Troubled Times.

A callout on social media for a game of catch in Dallas drew a varied group of strangers who found escape from society's turbulence in the most banal ritual.



By Mike Wilson

Published Jan. 15, 2021 Updated Jan. 16, 2021



Photo credit:
Jonathan Zizzo for
the new York Times

Connection



Photo Credit: Joseph V. Labolito for Temple Now



Photo Credit: Jocelyn Burns for Temple News



Photo Cred: Ryan S. Brandenberg for Temple Now

Connection



Photo: Students Run Philly Style

Authentic Safety is Essential for
Connections that Build Resilience



U.S. CENTER FOR
SAFESPORT[™]

Healthy Boundaries

**Guiding Youth in Crisis to
Get Support they Deserve**

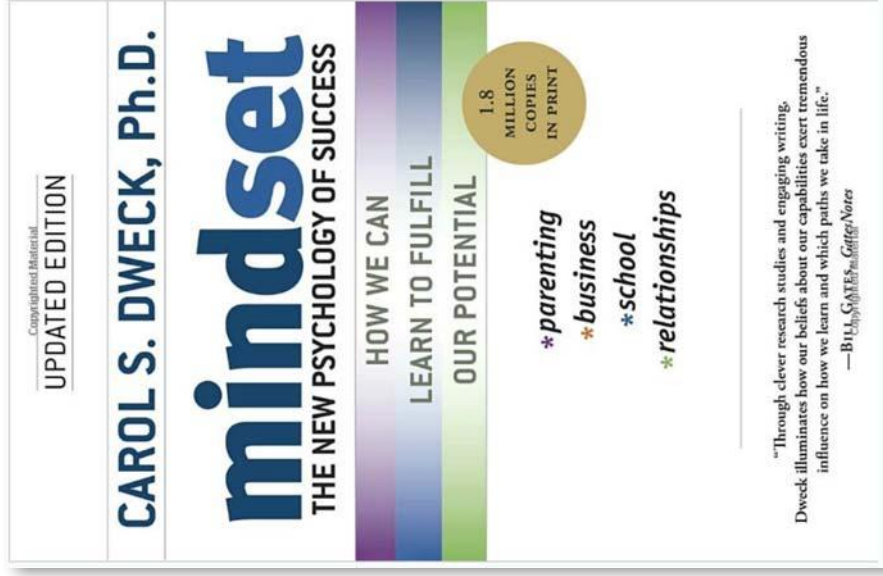


Development Framework

Mindset

Mindset: The New Psychology of Success

Carol Dweck Ph.D.
Ballantine Books, 2007

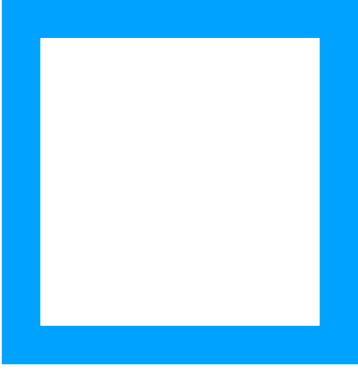


Fixed Mindset Growth Mindset



Adapted from Dweck C. Mindset: The New Psychology of Success. Ballantine 2007.

Fixed Mindset



- Talents are fixed
- Ranks are fixed
- Effort indicates weakness

Adapted from Dweck C. Mindset: The New Psychology of Success. Ballantine 2007.

Growth Mindset



- Talents and skills can be earned
- Ranks are modifiable
- Challenges indicate opportunity

Adapted from Dweck C. Mindset: The New Psychology of Success. Ballantine 2007.



Photo: Ballantine/Gallery Images

Adapted from Dweck C. Mindset: The New Psychology of Success. Ballantine 2007.

Praise for Growth

“You are ____.”

“You did ____, and as a result you ____.”

Adapted from Dweck C. Mindset: The New Psychology of Success. Ballantine 2007.



Contribution



Confidence

The “Hidden Curriculum” of Youth Sports



Character



Competence

The Syllabus

- Developmental structure
- Coaching, the language of “growth mindset”
- The learning process: Trial and progression
- What happens over time
- What young people see

Sports on TV



Photo Credit: Adam Preetly, Getty Images



Direct Experience in a Developmental Sports Program



FUN!

Grit

Grit: The Power of Passion and Perseverance

Angela Duckworth, Ph.D.
Scribner, 2016.



How Grit Works

Talent x **EFFORT** = Skill

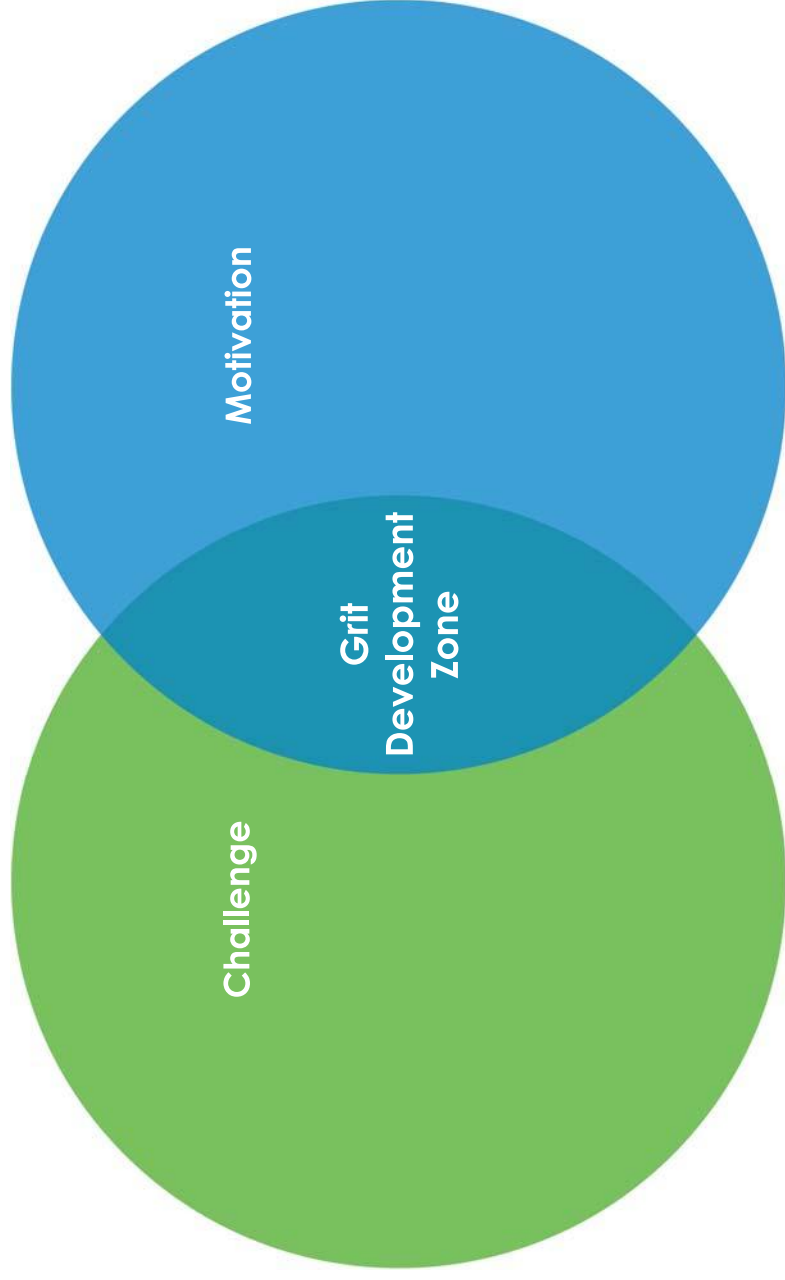
Skill x **EFFORT** = Achievement

Adapted from Duckworth, A. Grit: The Power of Passion and Perseverance. Scribner, 2016.

Components of Grit

Interest Practice Purpose Hope

Adapted from Duckworth, A. *Grit: The Power of Passion and Perseverance*. Scribner, 2016.



Adapted from Duckworth, A. *Grit: The Power of Passion and Perseverance*. Scribner, 2016.

Grit and Equity

Asking the right questions

Interest **Practice** **Purpose** **Hope**



Tying It All Together

Finding Resilience in Sports

1. Remember that all young people are athletes
2. Teach youth that one way to escape from a “Paper Tiger” is to run
3. Recognize role for sports and recreation in managing adversity
4. Get in the game, Stay in the game
5. Ensure safety for all who come to play
6. Help others recognize that play and sports are serious fun
7. Take the recreational interests of youth seriously
8. Help young people stick with activities that bring joy and challenge
9. Help young people to distinguish drudgery from passionate perseverance
10. Help caregivers evaluate sport and recreation programs through the lens resilience
11. Support caregivers and youth by highlighting model programs

Reaching Teens

STRENGTH-BASED, TRAUMA-SENSITIVE,
RESILIENCE-BUILDING COMMUNICATION STRATEGIES
ROOTED IN POSITIVE YOUTH DEVELOPMENT

Editor: Kenneth R. Ginsburg, MD, MS Ed, FAAP, FSAHM
Associate Editor: Zachary Brett Ramirez McClain, MD



- 400+ videos.
- Interdisciplinary guidance from 100+ youth-serving professionals and expert advice from teens.
- Earn up to 94 CME/CEU credits.



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Reaching Teens, 2nd Edition

Editors: Ken Ginsburg & Zachary McClain

American Academy of Pediatrics

On the web: <https://services.aap.org/en/publications/reaching-teens-2E/home>

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Sports and Physical Recreation Settings

Tailored experience for youth-serving professionals in sports and physical recreation settings

Reaching Teens Portal for Sports and Physical Recreation Settings

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Sports and Physical Recreation

Tailored experience for youth-serving professionals in sports and physical recreation settings

Why Sports and Physical Education Can Make a Difference

Understanding Adolescent Development

Core Communication Strategies

Creating a Real Team

Team Discipline

Supporting a Young Person Who May Be in Trouble

Guiding a Young Person to Get the Support They Deserve

Go Out And

PLAY



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