

Brief Research-to-Results

Child TRENDS®

...information for practitioners on stress in children and how to measure it.

Publication #2010-22

October 2010

ASSESSING STRESS IN CHILDREN AND YOUTH: A GUIDE FOR OUT-OF-SCHOOL TIME PROGRAM PRACTITIONERS

Mary Terzian, Ph.D., M.S.W., Kristin A. Moore, Ph.D., and Hoan N. Nguyen

OVERVIEW

Stress is unavoidable and can occur in all facets of life. At some level, stress can be seen as a natural part of development and of adaptation to a changing environment. Yet the implications of stress for children and youth can be far-reaching, depending on its level and persistence. Stress that is prolonged and managed poorly can result in negative physical, mental, and cognitive outcomes for children and youth.¹ Experiencing high levels of stress or chronic stress can undermine physical health, for example, by increasing the likelihood of a weakened immune system, heart disease, obesity, and diabetes.² Other negative outcomes include anxiety, depression, poor memory and language skills, and lower academic achievement.^{3,4} Biological or genetic factors can increase one's vulnerability to stress, as can social and environmental factors. For example, although stress can be problematic for children and youth of all socioeconomic backgrounds, children and youth from high-conflict families and those who live in high-crime, low-resource neighborhoods may be even more likely to experience chronic and/or high levels of stress.⁵ To minimize the risk for negative health and behavioral development, it is important for families, schools, and program providers to be able to recognize and help children cope with stress. Child Trends produced this brief to assist program providers in these efforts. For programs seeking to reduce stress in children and youth, we also provide information about two well-validated measures of stress.

WHAT IS STRESS?

Stress results from the tension between an individual's reaction to difficulties or challenges and his or her ability to handle and resolve the stressful situation. How people cope with stress depends on the resources that are available to them and whether they have the skills to utilize these resources. The term *stressor* relates to a challenging occurrence that may produce stress.

Acute stress reflects short-lived stress or "eventful" experiences that occur once or multiple times. For example, acute stress can result from relocating to a new town or having a serious disagreement with a parent.⁶ Whether these experiences result in negative or positive impacts on health and development depends on how one perceives and copes with the stressful experience. Acute stress that results from an unforeseen external event or significant life changes (such as a death of a parent, changing homes or schools, or being in a car accident) can be particularly upsetting because the individual experiencing this stress does not have control over the event, and many such events are very serious.

Chronic stress is an ongoing form of stress that occurs as a part of one's daily life and that continually taxes one's physical and mental resources. Types of chronic stressors that children and youth experience include frequent parental arguments, chronic illness, neighborhood crime, caregiving for a parent or sibling, and trying to adapt to another culture.

SIGNS OF STRESS

When a child or adolescent is experiencing difficulties coping with stress, he or she is likely to show changes in mood, behavior, and/or physical appearance. **Physical** changes include muscle tension, headache, stomachache, trouble sleeping, trouble eating, and lack of energy. **Emotional** changes include nervousness, anxiety, loss of enthusiasm about things he or she used to enjoy, anger or hostility towards peers, shyness or withdrawal, and feelings of helplessness and hopelessness. **Behavioral** changes include poor eating habits and excessive weight gain/loss over a short period of time.⁷ Being able to recognize the signs of stress is an important skill for practitioners working with children and youth.

WHO IS MOST VULNERABLE TO STRESS?

Children and youth who have one or more of the following characteristics may be particularly vulnerable to stress.^{8,9}

- Lack of economic resources;
- A tendency to blame negative events on themselves;
- Lack sufficient amounts of sleep, food, nutrition, or exercise;
- Prior history of psychological or behavioral disorder (such as attachment-related problems or anxiety), or a low tolerance for stress;
- Lack of social support (from peers or parents);
- Multiple co-occurring stressors; for example, living in a family environment with high conflict and in a neighborhood with high crime; or
- Residence in a socially isolated neighborhood.

Identifying individuals who have an increased vulnerability to stress is a useful first step when targeting services seeking to prevent physical and mental health problems among disadvantaged populations. While some risk factors may be known, others—such as sleeping and eating habits—may require screening or assessment.

WHAT SHOULD YOU DO IF YOU THINK A CHILD OR TEEN IN YOUR PROGRAM IS EXPERIENCING DIFFICULTY WITH STRESS?

- **Provide or increase access to social support.** Social support (in the form of emotional support, advice, assistance, and guidance) can reduce stress and improve coping skills.¹⁰ Program providers can offer this support, as well as involve parents, peers, teachers, or other caring adults in the community in providing needed support. Mentoring relationships (characterized by sustained support, guidance, concern, and encouragement) have been found to promote positive social development¹¹ and have been associated with improved attitudes toward school and more positive relationships with parents and friends.¹²
- **Teach breathing and relaxation techniques.** Breathing and relaxation techniques, such as deep breathing, yoga, and physical exercises, produce physiological changes (a slower heart rate and more relaxed muscles) that can help people to cope more easily with stress.¹³ They can also help to increase energy and focus, fight illness, and relieve aches and pains.¹⁴

- **Encourage involvement in sports and other extra-curricular activities.** Involving youth in positive pastimes, such as music and drama, arts and crafts, and religious activities, can help buffer stress or negative situations experienced in daily life, and aid in positive youth development.¹⁵
- **Consult clinical resources for additional guidance.** One useful resource for clinicians is the [Behavioral Health Toolkit](http://ahwg.net/resources/FINAL%20BH%20Toolkit.pdf) (<http://ahwg.net/resources/FINAL%20BH%20Toolkit.pdf>), which includes activities and handouts for teens.

ASSESSING STRESS AMONG ADOLESCENTS

Numerous measures of stress have been developed; some focus on daily hassles and life events, while others, more recently, focus on chronic stress and exposure to community violence. Below, we highlight two well-validated scales used to measure stress among adolescents. The first is the *Perceived Stress Scale (PSS)*,^{16,17} a self-report scale designed to measure the perception of stress. The second is the *Coddington's Life Events Scale for Adolescents (CLES-A)*,¹⁸ which assesses positive and negative life events that are relevant to adolescents. These scales are intended to be used in screening for risk or for research purposes; they are not for clinical or diagnostic use.

*Perceived Stress Scale – 10 item version (PSS-10)*ⁱ

Available in at least five languages, this self-report scale measures the degree to which one experiences psychological stress. Items were designed to assess feelings of being overwhelmed and being unable to control or predict events in one's life. This scale may be administered to high school students and adults who have at least a junior high school education.

Instructions: The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling *how often* you felt or thought a certain way. (Response values: 0=never, 1=almost never, 2=sometimes, 3=fairly often; 4=very often).

In the last month, how often have you:

- 1) Been upset because of something that happened unexpectedly?
- 2) Felt that you were unable to control the important things in your life?
- 3) Felt nervous and "stressed"?
- 4) Felt confident about your ability to handle your personal problems?
- 5) Felt that things were going your way?
- 6) Found that you could not cope with all the things that you had to do?
- 7) Been able to control irritations in your life?
- 8) Felt that you were on top of things?
- 9) Been angered because of things that were outside of your control?
- 10) Felt difficulties were piling up so high that you could not overcome them?

To score this measure, reverse the scores for the positively stated items (items 4, 5, 7, and 8), such that a score of 4 will become a score of 0, a score of 3 will become a score of 1, and so on.

ⁱ A four-item version of this scale (PSS-4), which includes questions 2, 4, 5, and 10, has been tested as well. Questions 2 and 10 have also been used to assess stress as part of a baseline questionnaire that Child Trends helped to develop for a large-scale evaluation.

Next, sum the reverse-scored items with the remaining 6 items. Scores range from 0 to 40. This scale has no diagnostic cut-offs. Higher scores correspond to a higher level of perceived stress.

Coddington's Life Events Scale for Adolescents (CLES-A)

Recently adapted into Spanish,¹⁹ the Coddington Life Events Scale (CLES) measures the experience of certain life stressors in the past year. Developed for adolescents aged 13 to 19, the CLES-A asks respondents to rate the number of times a stressor occurred in the past year and how long ago (in the last 3 months, in the last 4 to 6 months, in the last 7 to 9 months, or in the last 9 to 12 months). The full scale consists of 50 items. Two other versions of this scale – one for parents (30 items) and one for children aged six to 12 (36 items) – are also available. The instrument is typically administered by a professional with advanced training in psychological assessment, but it can also be administered by a trained paraprofessional. Below are some examples of the negative life events included in the scale.

- | | |
|----------------------------------|--------------------------------------|
| 1. Sibling was born | 12. Parent obtained a job |
| 2. Parents were separated | 13. Parent spent less time at home |
| 3. Parents were divorced | 14. Family member moved in |
| 4. Parent remarried | 15. Sibling left home |
| 5. Serious illness of parent | 16. Child was abused |
| 6. Serious illness of sibling | 17. Parents fought more |
| 7. Parent died | 18. Parent had to go to jail |
| 8. Grandparent died | 19. Family moved school districts |
| 9. Relative or close friend died | 20. Family moved to a new city |
| 10. Discovery of being adopted | 21. Parents worried more about money |
| 11. Loss of job by parent | 22. Substance abuse by family member |

To administer and score this scale properly, a package of questionnaire materials with scoring instructions (available for purchase online) must be consulted.ⁱⁱ Scoring methods weight more recent events and more frequent events more heavily than less recent and less stressful events.

ADDITIONAL MEASURES

- **[Child Stress Disorders Checklist](#)**, a free checklist for parents of children aged two to 18. **Reference:** Saxe, G., Chawla, N., Stoddard, F., Kassam-Adams, N., Courtney, D., Cunningham, K., Lopez, C., Sheridan, R., King, D., & Kind, L. (2003). Child stress disorders checklist: A measure of ASD and PTSD in children. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42(8), 972-978. For online access, go to http://www.nctsn.org/nctsn_assets/acp/hospital/CSDC.pdf.

HELPFUL RESOURCES

- **[The Measures Review Database](#)**, a database of assessment tools developed by The National Center for Traumatic Stress Network. This database allows users to search a list of measures related to traumatic stress and many other domains. It notes the cost of the

ⁱⁱThis questionnaire can be ordered online at Multi-Health Systems (MHS) Psychological Assessments and Services, by going to <http://www.mhs.com>.

measure and where to obtain it, and provides other useful information. For online access, go to <http://www.nctsnct.org/nctsnct/SearchMeasures.do>.

- [Medline Plus](#), published online by The National Institutes of Health. For online access, go to <http://www.nlm.nih.gov/medlineplus/stress.html>.
- [Building Resilience in Children and Teens: Giving Your Child Roots and Wings](#), published by the American Academy of Pediatrics. This resource offers a 10-point guide for managing stress. It includes an online form that teens can use to help them manage their own stress. For online access, go to <http://www.aap.org/stress/buildresl-A.cfm>.
- [A meta-analysis](#): Kraag, G., Zeegers, M. P., Kok, G., Hosman, C., & Abu-Saad, H. H. (2006). School programs targeting stress management in children and adolescents: A meta-analysis. *Journal of School Psychology, 44*, 449-472. For online access, go to <http://www.realtutoring.com/phd/metaanalysisSchools.pdf>.

ACKNOWLEDGEMENTS

The authors would like to thank Dr. Susan Gore, Ph.D., of the University of Massachusetts-Boston for her careful review and helpful comments on this research brief.

Editor: Harriet J. Scarupa

REFERENCES

- ¹ Steinberg, L. (2005). *Adolescence* (7th ed.). New York, NY: McGraw-Hill.
- ² Rosmond, R. (2005). Role of the pathogenesis of the metabolic syndrome. *Psychoneuroendocrinology, 30*(1), 1-10.
- ³ Farah, M., Nobel, K., & Hurt, H. (2007). The developing adolescent brain in socioeconomic context. In D. Romer (Ed.), *Adolescent psychology and the developing brain: Integrating brain and prevention science* (pp. 373-387). New York, NY: Oxford University Press.
- ⁴ Evans, G.W., & Schamberg, M.A. (2009). Childhood poverty, chronic stress, and adult working memory. *Proceedings of the National Academy of Sciences, 106*, 6545-6549.
- ⁵ Gershoff, E.T., Aber, J.L. & Raver, D.C. (2003). Child poverty in the U.S.: An evidence-based conceptual framework for programs and policies. In R.M. Lerner, F. Jacobs, & D. Wertlieb (Eds.), *Handbook of Applied Developmental Science*, Vol. 2 (pp. 81-136). Thousand Oaks, CA: Sage Publications.
- ⁶ Newcomb, M. D., Huba, G. J., & Bentler, P. M. (1981). A multidimensional assessment of stressful life events among adolescents: Derivation and correlates. *Journal of Health and Social Behavior, 22*, 400-415.
- ⁷ Romer, G. (1993). Assessing stress in children: A literature review. *Presentation at the 1993 Mid-South Educational Research Association Conference, (pp1-17)*. New Orleans, LA.
- ⁸ Thoresen, C.E., & Eagleston, J.R. (1983). Chronic stress in children and adolescents. *Theory Into Practice, 22*, 48-56.
- ⁹ Gershoff, E., Aber, J., & Raver, C. (2003).
- ¹⁰ Hair, E., Jager, J., & Garrett, S. (2002, July). Helping teens develop healthy social skills and relationships: What the research shows about navigating adolescence (*Research Brief*). Washington, DC: Child Trends.
- ¹¹ Rhodes, J., Grossman, J., & Roffman, J. (2002). The rhetoric and reality of youth mentoring. *New Directions for Youth Development, 93*, 9-20.
- ¹² Jekielek, S., Moore, K., Hair, E., & Scarupa, H. (2002, February). Mentoring: A promising strategy for youth development (*Research Brief*). Washington, DC: Child Trends.
- ¹³ HelpGuide: A trusted non-profit resource. (2009). Stress relief: Relaxation practices that reduce stress.
- ¹⁴ Christensen, J., Fatchett, D. (2002). Promoting parental use of distraction and relaxation in pediatric oncology patients during invasive procedures. *Journal of Pediatric Oncology Nursing: Official Journal of the Association of Pediatric Oncology Nurses, 19*(4), 127-132.
- ¹⁵ Zarrett, N., & Lerner, R. (2008, February). Ways to promote the positive development of children and youth (*Research-to-Results Brief*). Washington, DC: Child Trends.

¹⁶Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The social psychology of health: Claremont Symposium on applied social psychology*. Newbury Park, CA: Sage.

¹⁷ Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 385-396.

¹⁸ Coddington, R. D. (1972). The significance of life events as etiologic factors in the diseases of children: I – A survey of professional workers. *Journal of Psychosomatic Research, 16*, 7-13.

¹⁹ Villalonga-Olives, E., Valderas, J. M., Palacio-Vieira, J., Herdman, M., Rajmil, L., & Alonso, J. (2008). The adaptation into Spanish of the Coddington Life Events Scale (CLES). *Quality of Life Research, 17*, 447-452.

SPONSORED BY: The Atlantic Philanthropies

© 2010 Child Trends. *May be reprinted with citation.*

4301 Connecticut Ave, NW, Suite 350, Washington, DC 20008, www.childtrends.org

Child Trends is a nonprofit, nonpartisan research center that studies children at all stages of development. Our mission is to improve outcomes for children by providing research, data, and analysis to the people and institutions whose decisions and actions affect children. For additional information on Child Trends, including publications available to download, visit our Web site at www.childtrends.org. For the latest information on more than 100 key indicators of child and youth well-being, visit the Child Trends DataBank at www.childtrends.org. For summaries of more than 440 experimental evaluations of social interventions for children, visit www.childtrends.org/LINKS.