Emotional Disturbance (ED): Adverse Childhood Experiences (ACE's), Toxic Stress, and the Buffering Effect of Relationships

Shelley R. Hart, PhD, NCSP
California State University, Sacramento
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Agenda

- Emotional Disturbance (ED) Assessment/Identification
- ED "Causes"
  - Genetics
  - Brain Basics
  - Adverse Childhood Experiences (ACE's)
- ED Planning/Programming
  - Relationships

Mental Health "State of the Union"

- National Comorbidity Study found that 20% of teens (13-18 years old) are affected by a diagnosable mental disorder resulting in significant impairment in their lifetime
- Prevalence type:
  - 11% with mood disorder
  - 8% with anxiety disorder
  - 10% with behavioral disorder
- Gender differences:
  - Females more likely to demonstrate mood and/or anxiety disorders
  - Males more likely to have behavioral disorders, ADHD, and substance abuse

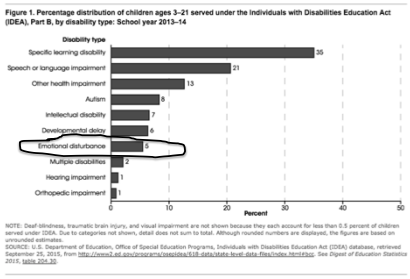
(Merikangas, He, Burstein, Swanson, Avenevoli, Cui, … Swendsen, 2010)

Mental Health "State of the Union"

- Comorbidity:
  - 40% meet criteria for an additional disorder
  - Those with a mood disorder were more likely to have a comorbidity
- Age results:
  - Anxiety tend to emerge by age 6
  - Behavior disorders by age 11
  - Mood disorders by age 13
  - Substance abuse disorders by age 15
- Parent characteristics:
  - Parents with less education = increased risk for having mental disorder
  - Children with divorced parents were at higher risk

(Merikangas, He, Burstein, Swanson, Avenevoli, Cui, … Swendsen, 2010)

Special Education



ED "State of the Union"

Students with ED:

- $^1/_4$ of all ED students are African American
- Are more likely to be in most restrictive settings & receive "home-based" instruction
- Are 2x's as likely to drop out of school
- Earn lower grades than children with other disabilities
- Are more likely to have inconsistency in educational staff
- $^1/_2$ have at least one arrest within three years of leaving school

(Fiefer & Rattan, 2009; Kaushik, Kostaki, & Kyriakopoulos, 2016; Merrell & Walker, 2004; Reddy, 2001)

ED "State of the Union"

Students with ED:

- 1/2 of all ED students come from single parent households
- 1/3 come from households with annual income of less than $12,000 per year
- Have a disproportionate rate of physical abuse—more than any other disability group
- Are more likely to have experienced child welfare intervention
- Still face challenges with identification, assessment, stigma and appropriate programming

(Fiefer & Rattan, 2009; Kaushik, Kostaki, & Kyriakopoulos, 2016; Merrell & Walker, 2004; Reddy, 2001)

ED Assessment/ Identification

Meta-messages: Define your "lens"

- Diagnosis is only as good as the diagnoser.
- Children do well if they can.
- "An explosive outburst – like other forms of maladaptive behavior – occurs when the cognitive demands being placed upon a person outstrip that person's capacity to respond adaptively."
- Behavior "problems" in children are really opportunities for adults.
- Development occurs within a transactional-ecological framework.

Legal Definition

Emotional Disturbance (ED) means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance:

ED Eligibility Criteria

(A) An inability to learn that cannot be explained by intellectual, sensory, or health factors.

(B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.

(C) Inappropriate types of behavior or feelings under normal circumstances.

(D) A general pervasive mood of unhappiness or depression.

(E) A tendency to develop physical symptoms or fears associated with personal or school problems.

ED Additional Clause… of Confusion

- *Note*: This term includes schizophrenic children, but does not include children who are "**socially maladjusted**" unless it is determined that they are also "seriously emotionally disturbed" children within the IDEA definition.

ED Additional Clause… of Confusion

THERE ARE NO KNOWN IMMUNIZING DISORDERS FOR AN ED

(Cecil R. Reynolds, January, 2017, personal communication)

ED Assessment: Screening/RtI

- Behavioral interventions provided sooner rather than later are:
  - **MORE SUCCESSFUL**
  - **MORE COST EFFECTIVE**
- What do we use to screen?
- Importance of positive/adaptive coping as well as deficits/challenges.

(Fiefer & Rattan, 2009)

ED Assessment: Screening

Tool	Age Range
BASC-2 Behavioral & Emotional Screening System (BESS)	Preschool-Grade 12
Social Skills Improvement System (SSIS) Performance Screening Guide/SSIS Family	Preschool-Secondary
Functional Assessment & Intervention System (Social Competence Performance Checklist)	Children & Adolescents

(Feifer & Rattan, 2009)

ED Assessment: Screening/RtI

- Behavioral interventions provided sooner rather than later are:
  - **MORE SUCCESSFUL**
  - **MORE COST EFFECTIVE**
- What do we use to screen?
- Importance of positive/adaptive coping as well as deficits/challenges.
- How do screening measures help establish appropriate interventions/planning?
- What do we use to monitor progress?

(Fiefer & Rattan, 2009)

ED Assessment: Progress Monitoring

Tool	Age Range	Areas
Beck Youth Inventory—Second Edition (BYI0II)	7-18 yo	Discrete behavioral or emotional skills (anger, depression, etc)
Functional Assessment and Intervention System (FAIS)	Children & Adolescents	Decrease of challenging behaviors, increase of prosocial behaviors
BASC Progress Monitor	Children & Adolescents	Decrease of challenging behaviors, increase of prosocial behaviors
SSIS	3-19 yo	Social skills improvement

(Feifer & Rattan, 2009)

ED Assessment: Special Education

- What areas will be looking at?
  - General Intellectual Functioning
  - Social Emotional Functioning
  - Sensory-Motor Functioning
  - Attentional & Executive Functioning Skills
  - Memory & Learning Skills
  - Visual-Spatial Functioning
  - Language Skills
  - Academic Achievement

(Miller, 2007)

ED Assessment: Special Education

- Need: history, functioning & context
- Requires obtaining information via Direct & Indirect Measures/Methods
  - Interviews
  - Self-report (if viable)
  - Other's reports
  - Observations of behavior
  - Direct testing

(Ramsay, Reynolds, & Kamphaus, 2002)

ED Assessment: Special Education

- Testing Considerations
- Who are the involved parties?
  - Student
  - Teachers
  - Parents
  - Others?
    - Release of Information

- Referral Question
  - Understand the focus of the assessment
  - Eligibility Category?
  - Secondary Disabilities

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ED Assessment: Special Education

- Health & Developmental
  - Family History
  - Health History
  - Medical History

- Current Medical Status
  - Vision/Hearing
  - Any medical conditions that may be impacting presentation?
  - Medications

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ED Assessment: Special Education

- Observations
  - What do you want to know?
  - Where do you want to see the child?
  - What type of information will you be collecting?
  - Formal tools vs. informal observations
    - Behavioral Observation of Students in Schools (BOSS)
    - The Ounce Scale
- Interviews
  - Who?
  - Questionnaires, phone calls, or face-to-face?
  - Structured interview tool OR questionnaire
    - BASC Structured Developmental History (SDH)

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ED Assessment: Special Education

- SDH
  - Primary caregivers
  - Child care
  - Family history
  - Siblings
  - Family relations
  - Pregnancy
  - Birth
  - Development
  - Medical history
  - Family health
  - Friendships
  - Recreation/interests
  - Behavior/temperament
  - Adaptive skills
  - Educational history
  - Additional comments

(Ramsay et al., 2002)

ED Assessment: Special Education

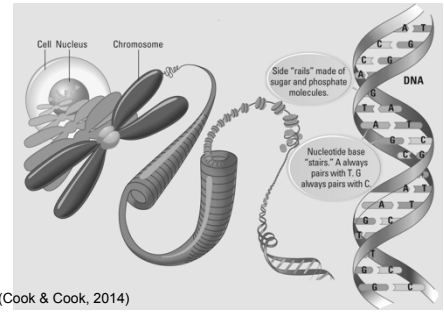
- Behavior Rating Scales
  - Narrow band
  - Broad band
    - *Child-Behavior Checklist* (CBCL)
    - *Behavior Assessment System for Children* (BASC)
    - *Devereux Scales of Mental Disorders* (DSMD)
- Projective Measures
  - Draw-A-Person
  - Thematic Apperception Test (TAT)
  - Children's Apperception Test
  - Rorschach
  - Sentence Completion

ED Assessment: Special Education

- Other functioning areas:
  - Favorite tools?
    - Cognitive Abilities
    - Executive Functioning
    - Memory & Learning Skills
    - Sensory-Motor Functioning
    - Visual-Spatial Functioning
    - Academic Achievement

ED "Causes"

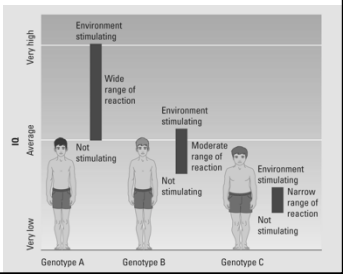
Genetics Basics



(Cook & Cook, 2014)

Genetics Basics: Theories

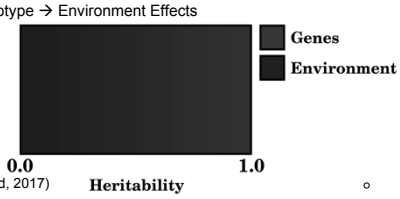
- **Range of Reaction**: Idea that individual's genotype establishes boundaries on the possible phenotype that can occur.



(Cook & Cook, 2014)

Genetics Basics: Theories

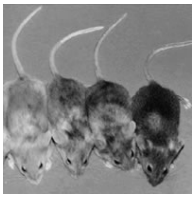
- **Genotype → Environment Effects**: Idea that based on our genotype we create our own environments (to a certain extent)
  - Passive genotype → Environment Effects
  - Evocative genotype → Environment Effects
  - Active genotype → Environment Effects



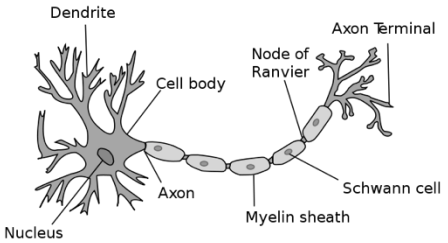
(Arnett & Maynard, 2017)

Genetics Basics: Theories

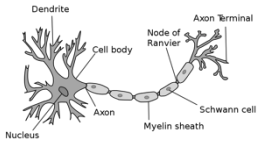
- **Epigenetics**—Idea that there are BIDIRECTIONAL interactions between the genes and environment.



Development: Neuronal



Development: Neuronal



Important Concepts:
- Myelin Growth
- Experience-Dependent Growth
- Adaptation
- Pruning
- Plasticity

(Siegel, 2013; Ziegler, 2002)

Brain Basics: Hemisphere Specialization

- Brain is asymmetrical (left & right = different functions)
- Two hemispheres work together via the corpus callosum, which becomes increasingly "practiced" in coordinating communication as we grow
- Left
  - Controls the conscious, routine, detailed, aware (explicit), cognitive, rational, & verbal mental states
- Right
  - Detects & responds to unexpected stimuli that are perceived below consciousness (implicit) & mediates perception of spatial relations, global patterns, emotional (affective) experiences, facial recognition, & psychobiological states
  - Right dominant over the left in identifying & managing emotional experiences

(Montgomery, 2013)

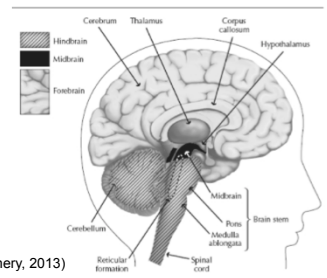
Brain Basics: Right Hemisphere

- Attunement: Subtle adjusting that may occur between two brains (especially in relation to arousal & energy shifts)
- Bonding: connection (felt experience) between two brains
- Attachment: affect management strategy that develops over time, whose formation depends upon the interaction between and individual and his/her caregiver
- These brain-brain interactions promote the development of cerebral circuits
- These experiences that happen in early childhood are the underpinnings of emotion regulation

(Montgomery, 2013)

Brain Basics: Development

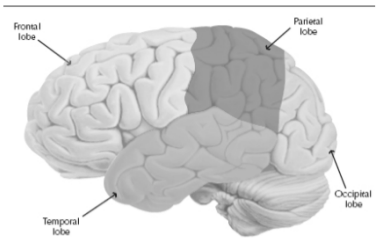
FIGURE 1.1
Hindbrain, Midbrain, and Forebrain



(Montgomery, 2013)

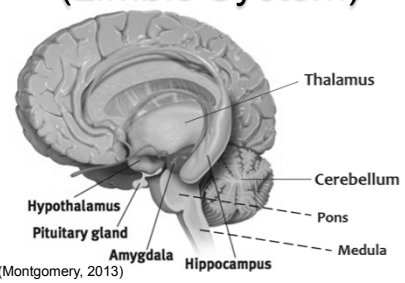
Brain Basics: Development

FIGURE 1.2
The Four Lobes of the Cortex



(Montgomery, 2013)

Brain Basics: Development (Limbic System)



(Montgomery, 2013)

Brain Basics: Development

Brain Structure	Social Emotional Process
Somatosensory Cortex	Representation of emotional stimuli
Fusiform Gyrus (Right Hemisphere)	Face perception
Superior Temporal Gyrus	Representation of perceived action Perception of gaze & motion
Amygdala	Ascribing emotional valence to stimuli Threat appraisal Fear conditioning
Hippocampus	Emotional learning & memory Anxiety
Nucleus Accumbens	Positive emotions & anticipation of reward
Corpus Striatum	Detects the presence of rewards & represents reward related goals

(Adapted from Yeates et al., 2007 and Whittle et al., 2006 as cited in Feifer & Rattan, 2009)

Brain Basics: Development

Brain Structure	Social Emotional Process
Anterior Cingulate Cortex	Motivation & reward-based decision making Distributed attention system involved with "theory of mind" Response inhibition & constraint
Orbitofrontal cortex (right hem)	Self-regulation of behavior Monitor reward valued of stimulus Response-reversal learning Emotional executive functions
Ventromedial prefontal cortex	Response inhibition Emotional regulation & executive functioning Theory of mind

(Adapted from Yeates et al., 2007 and Whittle et al., 2006 as cited in Feifer & Rattan, 2009)

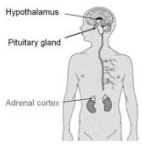
Brain Basics: Development

Brain Structure	Social Emotional Process
Dorsolateral Prefrontal Cortex	Cognitive executive functions Working memory
Left Prefrontal Cortex	Modulates positive emotions such as love, happiness, and euphoria
Right Prefrontal Cortex	Modulates negative emotions such as fear, hatred, and anger

(Adapted from Yeates et al., 2007 and Whittle et al., 2006 as cited in Feifer & Rattan, 2009)

Biology Basics: The Stress Response

- The developing brain organizes in response to the pattern, intensity, and nature of sensory perceptual and affective experiences of events during childhood (Bruce Perry, May, 2016, personal communication).
- Major organizing feature of the brain = rhythm
- The stress response activates the HPA (McLeod, 2010) and disrupts/dysregulates the system (Perry, 2016).



Biology Basics: The Stress Response

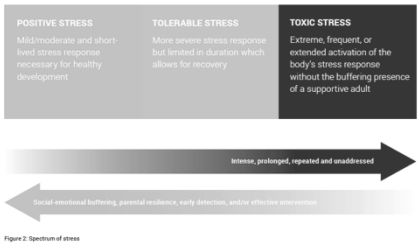
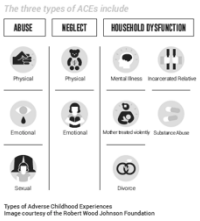


Figure 2: Spectrum of stress

Adverse Childhood Experiences (ACE's)

- Seminal study by Felitti and colleagues (1998) examining correlates of causes of death



Acknowledgement: Figures adapted from Center for Youth Wellness Data Report: A hidden crisis—Findings on adverse childhood experiences in California

ACE's CA Updates (2008, 2009, 2011, 2013)

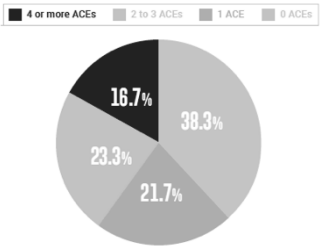
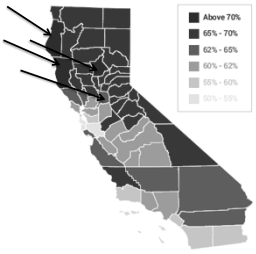
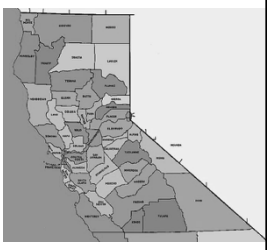


Figure 3: Prevalence of number of ACEs among California adults

Where do YOU rate?



Percent of residents with at least one ACE across California counties



Look up a county by ACE's

ACE's CA Updates (2008, 2009, 2011, 2013)

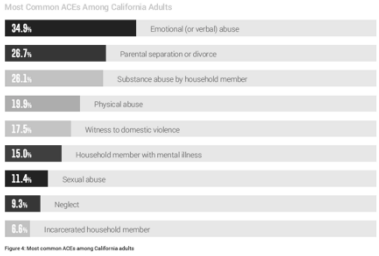
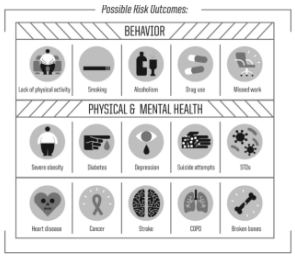


Figure 4: Most common ACEs among California adults

What are the Correlates of ACE's?



Credit: Robert Wood Johnson Foundation

ACE's CA Updates (2008, 2009, 2011, 2013)

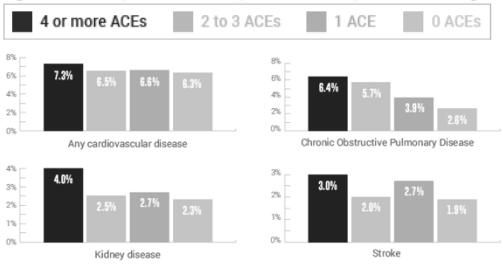


Figure 9: Relationship between ACEs and physical health (continued)

ACE's CA Updates (2008, 2009, 2011, 2013)

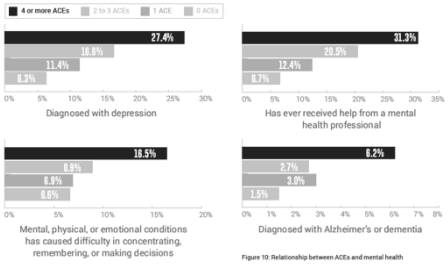


Figure 10: Relationship between ACEs and mental health

ACE's CA Updates (2008, 2009, 2011, 2013)

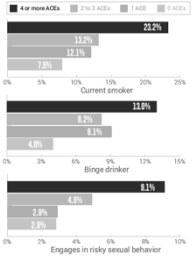


Figure 14: Relationship between ACE score and risky health behaviors

Influence of ACE's on Brain Functioning

- Developing brain is "exquisitely sensitive to stress" (Perry, 2016).
- Neglect appears to be the most pervasive & persistent form of trauma (when considering implications across the lifespan) & affects every aspect of the developing neurological system (Ziegler, 2002).
- Affects brain growth:
  - Overall size of brain smaller
  - Specific regions may be more impacted than others:
    - Smaller amygdalas, hippocampi, & prefrontal cortexes and larger right vs. left hemispheres (Ziegler, 2002)
- Affects physical system:
  - Found to have increased muscle tone, low grade increase in temperature, increased startle response, profound sleep disturbances, affect regulation problems & generalized (or specific) anxiety. Some studies also show abnormalities in cardiovascular regulation (Perry, 2016)

Influence of ACE's on Brain Functioning

- Equal concern with what the brain is NOT doing when it is preoccupied with "survival mode"
- Hypothalamic-Pituitary-Adrenal (HPA) Axis & Cortisol
- Neurotemplates
  - Experience-Dependent Growth: Neural systems activated change in permanent ways creating "internal" representations… memories (Perry, 2016)
  - These types of memories are typically stored where implicit memory is found (limbic system & brainstem, Siegel, 2012); here the memory is inaccessible to intentional recall or cognitive mediation (Ziegler, 2002).
- ?

ED Planning/ Programming

Programming Follows Assessment

- The information you collect should lead you to answers about the child's functioning: understanding the mechanisms underlying current functioning should help with next steps.
- What specifically did our assessment say?
- Link interventions, educational programming, and accommodations/modifications to results
- Use strengths to drive interventions as well

Use Knowledge about the Brain to Assist in Programming

- Find ways to help teachers, staff & parents ATTUNE with the child: a dysregulated child needs an adult to help regulate him/her!
- The hallmarks of any therapeutic interaction are safety, predictability, and nurturance—provide these ☺
- Educate others
- Educate the student him/herself with curriculum:
  - Brainology (mindset)
  - MindUP (mindfulness)

Classroom Strategies: Prevention

- Promote positive classroom climate
- Utilize a class wide behavior reinforcement system
- Anticipate challenging behavior & set up for success
- Provide high levels of structure
- Provide reasonable choices
- Identify & avoid triggers
- Recognize & interrupt escalation
- Employ an exit strategy

Giuliani & Pierangelo (2008)

Evidence Based Social Skills Training

Common Components
- Modeling
- Role play
- Feedback
- Peer mentorship Teambuilding activities
- Assigned leadership roles
- Social Problem Solving & Peer mediation

Recommended Curriculums
- *Strong Kids: Grades 6-8 and Strong Teens: Grades 9-12 Social and Emotional Based Learning Curriculums*
- *Coping Power*
- *Skill Streaming the Adolescent, A Guide for Teaching Prosocial Skills, Third Edition*
- *SOS (Sense of Self): A practical Guide for Leading Solution Focused Groups* Resolving Conflict Creatively Program K-8

(1999); What Works Clearinghouse (2012); Merrell, Carrizales, Feuerborn, Gueldner, B.A., & Tran (2007); Goldstein, McGinnis, Sprafkin, Gershaw, & Klein (1997); Tollison & Synatschk, (2007)

Classroom Strategies: Behavioral Intervention

- Establish classroom rules
- Frequently praise appropriate behavior
- Establish consequences for inappropriate classroom behavior
- Monitor challenging behavior
- Explicitly identify & teach replacement behavior(s)
- Provide opportunities to practice replacement behavior(s) when the target behavior is not in play

Best Practices (2008); Austin & Sciarra (2010)

Behavioral Intervention Continued

- Use individualized reinforcement systems
- Teach students to monitor their own behavior
- Be consistent
- Do not engage in power struggles
- Prepare for environmental factors or changes
- Check In-Check Out, Differential Reinforcement, First Step to Success & Self Regulation are effective programs for students with ED

Austin & Sciarra (2010); Giuliani & Pierangelo (2008); What Works Clearinghouse (2012)

Behavior Intervention Supports & the Law

- IDEA requires:
- The IEP team to consider the use of Positive Behavioral Interventions and Supports for any student whose behavior impedes his or her learning or the learning of others (20 U.S.C. §1414(d)(3)(B)(i)).
- A functional behavioral assessment when a child who does not have a behavior intervention plan is removed from their current placement for more than 10 school days (e.g. suspension) for behavior that turns out to be a manifestation of the child's disability (20 U.S.C. §1415(k)(1)(F)(i)).
- A functional behavioral assessment, when appropriate, to address any behavior that results in a long-term removal (20 U.S.C. §1415(k)(1)(D)).
- http://ideadiscipline.blogspot.com/

Evidence Based Clinical Intervention

- Cognitive Behavioral Therapy
- Strengths Based Solutions Focused Therapy
- Mindfulness & Meditation
- Psychoeducational Skill Development
- Treatment Management
- Intensive Mental Health Programming (IMHP)
- Transition Planning

Austin & Sciarra (2010); Marsh & Fristad (2002); Vernberg, Roberts, & Nyre (2008) ; Pierangelo & Giuliani (2008)

Questions?

Resources/References

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Contact Information

Shelley R. Hart, PhD, NCSP
(530) 898-5919
srhart@csuchico.edu

Assistant Professor
California State University, Chico
Department of Child Development

Research Associate
Johns Hopkins University
Bloomberg School of Public Health
Department of Mental Health