The Stress, Early Experiences and Development (SEED) Research Center was established at the University of Denver in 2014 to foster collaborative research and cross-sector communication about the ways that early experiences shape development across the lifespan. Our team of faculty and trainee scientists study populations experiencing a range of adversities including trauma, homelessness, low income, justice system involvement, discrimination, and other structural inequities and may also experience mental and physical health symptoms. Individuals and populations also demonstrate remarkable resilience.

We study the psychological, experiential, cognitive, social, behavioral and biological signatures of risk and resilience and several of us engage in the development and evaluation of promising prevention and intervention approaches. We study these processes across the lifespan, from the prenatal period, through early and middle childhood, adolescence, youth, during the transition to parenting and in adults. Our current members utilize cutting-edge methodologies including neuro-imaging (i.e. functional and structural magnetic resonance imaging, and diffusion tensor imaging), genotyping, bioassays (e.g. hormones, immunological markers, indices of cellular aging) and in-depth behavioral and observational approaches (e.g., neurocognitive assessments of children and adults, assessments of emotional regulation, temperament, and parenting, noise-level monitoring, and neighborhood and housing quality indices).
In 2017 alone, faculty in the SEED center were awarded new grants totaling over XXX. We have one open position for a new assistant tenure-track psychology department faculty member to join the SEED Center and these exciting collaborative efforts. We also have openings for postdoctoral, graduate and undergraduate trainees and look forward to an exciting year!

Alumni Matters

Lauren Shomaker
Clinical Psychology, Class of 2007

Lauren Shomaker earned her PhD in Child Clinical Psychology from the University of Denver (DU) in 2007. Her research training, under the mentorship of Dr. Wyndol Furman, focused on adolescent development and psychopathology, and prepared her to launch a career as an independent scientist. After completing an internship in pediatric and clinical psychology at Children’s National Medical Center (now Children’s National Health System) in Washington, D.C., Dr. Shomaker pursued a postdoctoral fellowship to study adolescent eating behavior and obesity, from a health and medical psychology framework, at the Uniformed Services University of the Health Sciences and the National Institutes of Health (NIH) Clinical Center in Bethesda, Maryland. In 2013, she returned to Colorado to accept a tenure-track position in the Department of Human Development and Family Studies in the College of Health and Human Sciences at Colorado State University in Fort Collins. She also was appointed to the Community and Behavioral Health Department of the Colorado School of Public Health, and serves, in addition, as an Assistant Clinical Professor of Pediatrics at the University of Colorado School of Medicine, where she collaborates with a number of scientists and physicians at Children’s Hospital Colorado and the Anschutz Medical Campus.

Dr. Shomaker’s training at DU was crucial in preparing her with the requisite clinical research skills to build an exciting career that merges her expertise in adolescent development and psychopathology with the major public health issues of obesity and obesity-related health comorbidities such as type 2 diabetes. In particular, her studies funded by an NIH K99/R00 Pathway to Independence Award, identified adolescent symptoms of depression as a risk factor for worsening insulin resistance, a main physiological precursor in the path to type 2 diabetes, and further, pointed to the possibility that intervening to lessen elevated depressive symptoms in overweight adolescents with a family history of diabetes might prevent worsening insulin resistance. Dr. Shomaker’s current studies center on the use of randomized controlled trials to evaluate brief behavioral interventions for depression and stress as a means of lessening excess weight gain and diabetes risk. Her studies evaluate the possible behavioral and physiological mechanisms, engage community partners in the adaptation of feasible and effective community-based programming, compare alternative therapeutic modalities such as cognitive-behavioral, mindfulness-based, and interpersonal psychotherapy, and work with high-risk groups including pregnant teens and teens with depression, binge-eating, and/or obesity.

Dr. Shomaker has a pending R01 grant supporting this science and recently, was recognized by Colorado State University with the College of Health and Human Science’s Tenure Track Scholarly Excellence
Award. Lauren lives in Fort Collins with her husband and two daughters; she is grateful to be back in Colorado – where she started her professional training and where the Rocky mountains have always felt like home.

Teaching Matters

By Laura Santerre-Lemmon, PhD
Director, Developmental Neuropsychology Clinic

The Developmental Neuropsychology Clinic is a specialty clinic within the Center for Child and Family Psychology. We specialize in the comprehensive assessment of learning disabilities (e.g., dyslexia), attentional disorders, and other neuropsychological problems in children, adolescents and young adults. The clinic was originally founded by Dr. Bruce Pennington as part of his Developmental Neuropsychology Lab and continues to provide research-based assessment services to families throughout Colorado and other nearby states, and to serve as a training program for our child clinical graduate students as well as select practicum students and interns from other psychology programs. As director of the clinic, I am very fortunate to be able to work with our excellent trainees and supervise them in learning to provide comprehensive evaluation services to our community.

Training is provided within a developmental framework, with support and peer supervision also provided by advanced trainees as each new student begins their 12-month rotation in the clinic. Each trainee completes at least 6 comprehensive evaluations across the training year, consisting of 6 to 7 hours of assessment across two evaluation days, participation in parent intake and feedback sessions, consultation with teachers and other professionals, and completion of comprehensive reports detailing assessment results and recommendations.

One of my favorite parts of our training model is our weekly case conference meetings. We discuss differential diagnosis and incorporate neuropsychological research and theory within the context of practical cases. Trainees present their assessment information, and as a group, we develop our case conceptualization and recommendations with a comprehensive and process-oriented approach. I think it is one of the most valuable aspects of training, as students are exposed to and participate in case formulation for a range of assessments throughout the year. I feel very fortunate to be able to supervise our trainees in this process and in supporting the families in our community with quality assessment services. It is fantastic to see our students’ growth across the year, and I look forward to working with our next group of wonderful trainees beginning this summer!

The Developmental Neuropsychology Clinic can be reached at 303-871-4403.
Many people have heard the term “dyslexia” but without further expertise, they are likely to be misinformed about what causes this disorder. Dyslexia is characterized by deficits in word reading that occur despite adequate educational opportunity and adequate intellectual abilities. Dyslexia is one of the most common learning disabilities, with prevalence estimates ranging from 5-20% of children affected, depending on the severity of the reading problem. The science of dyslexia has evolved rapidly over the past few decades, but it is clear that public conceptions have not kept pace. Many myths about dyslexia persist and are harmful for the early identification and treatment of children with dyslexia. Moreover, these myths prevent a deeper understanding of why readers with dyslexia struggle, and thereby interfere with our ability to create inclusive environments for these children and adults.

The most prevalent myth about dyslexia is that it is a visual problem that causes one to see letters and words backwards. This myth is perpetuated through popular culture references and images. For example, if you do a google image search for “dyslexia,” the top hits will involve reversed letters. This deeply embedded myth is persistent and reflects a fundamental misunderstanding about the disorder. If you talk with someone who has dyslexia, they will often express frustration that their challenges are so often misunderstood because their everyday experience is unrelated to letter reversals.

Myths about dyslexia have become pervasive in our public consciousness, but we have little empirical data about this problem. In a recent study, our lab investigated the prevalence of dyslexia myths in three groups of interest: educators (n=598), individuals with high neuroscience exposure (n=234), and the general public (n=3045). Our results showed surprisingly high endorsements: 76% of the general public, 59% of educators, and 50% of those with high neuroscience exposure endorsed the idea that dyslexia is caused by letter reversals. This result is stunning, especially given the advanced state of the science of dyslexia. Visual theories of dyslexia date back to the 1920’s and were rejected decades ago as it became clear that impairments in language abilities, such as phonological awareness and rapid naming, formed the underpinnings of dyslexia. Some children with dyslexia do make letter reversals, but typically-developing children make reversals as well through the ages of 8-9 years. For children with dyslexia who make persistent letter reversals beyond the normative age, these reversals can best be understood as a consequence of poor reading and its associated cognitive impairments, rather than a cause of the reading problems. Misunderstandings about the true causal factors in dyslexia leads to the persistence of visual interventions for reading that do not have an evidence base, and which may delay access to more effective treatments.

Given the pervasiveness of myths about dyslexia, what needs to be done to create more inclusive environments for individuals with dyslexia? As a first step, those of us in the learning disabilities field must grapple with the wide information gap regarding dyslexia that is impacting children nationwide. Colorado is making strides to improve early identification and treatment for children with dyslexia through legislation like the READ Act, passed in 2013. Still, there is much to be done to disseminate
better information about dyslexia to parents, teachers, and other healthcare providers. It is instructive to contrast the state of community knowledge about disorders like autism in comparison to dyslexia. About a decade ago, the field of autism launched a concerted public education campaign that successfully advanced the national conversation about autism from narrow examples like “Rain Man” to consideration of the full autism spectrum. A similar kind of public information campaign may be necessary to dispel myths about dyslexia and inform parents about early warning signs and effective evidence-based interventions. Such work is ongoing at organizations like the American Academy of Pediatrics and the International Dyslexia Association, yet the results from our current study show that progress has been modest so far. Our lab is aiming to contribute to these public education efforts by drawing attention to the detrimental information gap about the causes of dyslexia. A first step towards creating more inclusive environments for children with dyslexia must involve a better understanding of the nature of their strengths and challenges.

Major Matters

By Madison Gutwein
Project Coordinator

Each year, the Psychology Department recognizes outstanding undergraduate and graduate student achievements at a spring awards ceremony. This year was no exception as students, family, faculty, and staff packed Frontier Hall in May to recognize the hard work and achievements of psychology students.

Several undergraduate students were recognized for their accomplishments with named awards. These awards included:

- The Trowill Award for Meritorious Work in Psychology recognizes a graduating senior for meritorious work in psychology. **2017 recipients: Nadeen Khweis and Amber Varela**
- The Shaklee-Trowill Research Award recognizes an exceptional senior honors research paper. **2017 recipient: Laurel Gaeddert**
- The Bernard Spilka Undergraduate Scholarship is awarded to the rising junior or senior judged most likely to make a significant contribution to the field of psychology. **2017 recipient: Bryn Babbitt**
- The Elsie Lincoln Vandergrift Memorial Scholarship is awarded to a student who shows promise and accomplishment in psychology. **2017 recipient: Thanh Viet Anh Vo**

Graduating seniors who completed our departmental distinction program, which culminates in an empirical senior honors thesis, were recognized, including:


In addition, dozens of undergraduate students who play a critical role in the life of our department were recognized for their academic, citizenship, and research accomplishments and contributions.
Graduate students were also recognized during the awards ceremony. In addition to awards for teaching assistants and service, two competitive awards were made. These included:

- The Harry Gollob Award recognizes the best first author publication by a current graduate student. **2017 recipients: Elric Elias and Kayla Knopp**
- The Inclusive Excellence in Research Award recognizes the best first-author paper that substantively discusses issues of inclusive excellence. **2017 recipient: Skyler Leonard**

Congratulations to psychology students for an outstanding year! We wish graduating seniors all the best and look forward to welcoming our returning students back in the fall for another excellent year.