



PennState
Social Science
Research Institute

Annual Report

2018- 2019

www.ssri.psu.edu

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Our Mission

The Social Science Research Institute fosters novel, interdisciplinary research in the social and behavioral sciences that addresses critical human and social problems at the local, national, and international levels. We do so by bringing together researchers from different disciplines around emerging areas of study and by providing consultation, financial support, and shared infrastructure and services to social and behavioral scientists at Penn State.

SSRI New Centers

Consortium to Combat Substance Abuse

The Consortium to Combat Substance Abuse (CCSA) will draw on the expertise of researchers, educators and practitioners from across Penn State. The group will develop and implement effective programs, policies and practices aimed at preventing and treating addiction and its effects on children, families and communities. In addition, the consortium will provide seed-grant funding for new interdisciplinary teams and sponsor an annual conference to bring together experts from across the state and nation on issues pertaining to substance misuse and abuse.

Activities of the consortium this year included the CCSA's first annual conference, the launch of a strategic hiring process aimed at recruiting 12 new faculty members with expertise in substance misuse and addiction and funding new interdisciplinary teams to conduct pilot research on multiple aspects of this complex problem.

The CCSA is led by interim director Stephanie Lanza, professor of biobehavioral health and director of the Edna Bennett Pierce Prevention Research Center at Penn State. Lanza has devoted her career to advancing research on prevention of substance abuse through innovative quantitative methods.

Evidence to Impact Collaborative

The Evidence to Impact Collaborative (EIC) facilitates the translation of social science research into measurable societal impact by increasing its relevance to policymakers and practitioners. This includes accelerating partnerships to access, protect, link and analyze sensitive data, as well as providing the core infrastructure to facilitate the translation of research into policy. By leveraging sensitive data for cutting-edge research, the social scientists of the EIC forward scientific inquiry across interdisciplinary domains. The ultimate aim of the EIC is glean value from evidence and foster strategic partnerships in order to advance research and improve lives.

The EIC is led by Director Max Crowley, assistant professor of human development & family studies and director of the Penn State Administrative Data Accelerator. Crowley studies the translation of scientific evidence for policy and practice decision-making, with a focus on investigating how to support high impact investments in social systems and human behavior across public systems and sectors.

The EIC also supports translation of scientific evidence for impact through training opportunities and a new podcast series, being led by Michael Donovan, associate director of the EIC. The podcasts involve discussions between researchers and policymakers to promote the use of evidence in solving social and human problems facing local communities, the state, and beyond.

Letter From the Director

Indeed, social science research extends from the genome to the globe, and its impacts range from the development of evidence-based social policies that target vulnerable populations, to education programs aimed at learning and skill building, to everyday behavioral practices that promote health and prevent disease.

SSRI's 2018-2019 Annual Report presents a sampling of the many groundbreaking, interdisciplinary research projects led by Penn State's social and behavioral scientists. We focus this year on projects that align with the Institute's current strategic aims: the human system, social disparities, smart and connected health, innovative methods, and dissemination and implementation science. In describing these projects, the Annual Report also highlights SSRI's research units and activities, the growing number and scope of supports by SSRI's units, and the success of SSRI's seed grant program in our faculty's efforts to win external funding for their research.

One measure of the achievements of Penn State's social and behavioral science faculty is their success in obtaining federal funding. The National Science Foundation's most recent (2017) report ranked Penn State's social and behavioral sciences tenth overall of 902 institutions for research and development expenditures in the social sciences. The report included Penn State's ranking of second in the field of sociology and third in the field of psychology.

A major focus of the Institute this year was advancing the translation of scientific evidence into real-world impact. Key steps toward this aim were the launch of two new initiatives: The Consortium to Combat Substance Abuse (CCSA) and the Evidence to Impact Collaborative (EIC).

Stephanie Lanza, professor of biobehavioral health and director of the Edna Bennett Pierce Prevention Research Center, is serving as the interim director of CCSA (see page 1). Activities of the Consortium this year included the CCSA's first annual conference, the launch of a strategic hiring process aimed at recruiting 12 new faculty members with expertise in substance misuse and addiction, and funding new interdisciplinary teams to conduct pilot research on multiple aspects of this complex problem.

At the heart of the EIC is the Data Accelerator, a secure data enclave whose holdings include sensitive state and federal administrative data (see page 1). Led by director Max Crowley, assistant professor of human development and family studies, the EIC also supports translation of scientific evidence for impact through training opportunities and a new podcast series.

In another effort to advance the Institute's translational mission, SSRI convened a delegation of Penn State social science researchers to attend the Consortium

of Social Science Association's 2019 Science Policy Conference and Social Science Advocacy Day in Washington, DC. Penn State was represented by researchers in demography, criminology, sociology, psychology, and human development and family studies. These researchers attended plenary sessions and met with staff from Pennsylvania's legislative offices.

Finally, SSRI welcomed four new co-funded faculty members whose research is relevant to social policies pertaining to education and health disparities: Maithreyi Gopalan, assistant professor of education; Alexis Santos, assistant professor of human development and family studies, and demography; Kenneth Shores, assistant professor of human development and family studies; and Ericka Weathers, assistant professor of education.

These professors join a highly productive and talented group of SSRI co-funded faculty members whose interdisciplinary research is advancing social and behavioral science. SSRI's co-funded faculty support reflects the range of partnerships between the Institute and academic units around the University: Currently, SSRI provides salary support for 45 faculty members from 15 departments in 5 colleges (see page 7).

As I hope this report communicates, the social and behavioral sciences remain a vibrant component of Penn State research. In the coming year, the SSRI, through its infrastructure and support mechanisms, will continue to promote and enhance this vital work.

Susan McHale, Ph.D.

Director

2014-2024 Strategic Research Themes



The Human System

How environments and experiences get under the skin to affect stress and immune functions, social, cognitive, and affective neural processes, and gene-related mechanisms—and the ways in which these bio-psycho-social processes both shape and are shaped by human behavior, health and development.



Social Disparities

Discovery of causes and consequences and development of evidence-based policies, programs, and practices for remediating widening gaps in the health, education, and community resources of vulnerable populations, including children, youth, elders, and their families—toward sustaining a diverse and changing population in a global society.



Smart and Connected Health

Health and mental health promotion and disease prevention and treatment using novel methodologies (electronic devices, social media, human-technology hybrids), "big data" analytics, and other innovations for enhancing health and health behavior and optimizing health care and health care delivery using evidence-based practices and policies toward a sustainable health system.



Innovative Methods

Novel approaches to research design, data collection, security, and archiving, and modeling and analysis pertaining to our targeted foci and beyond.



Dissemination and Implementation Science

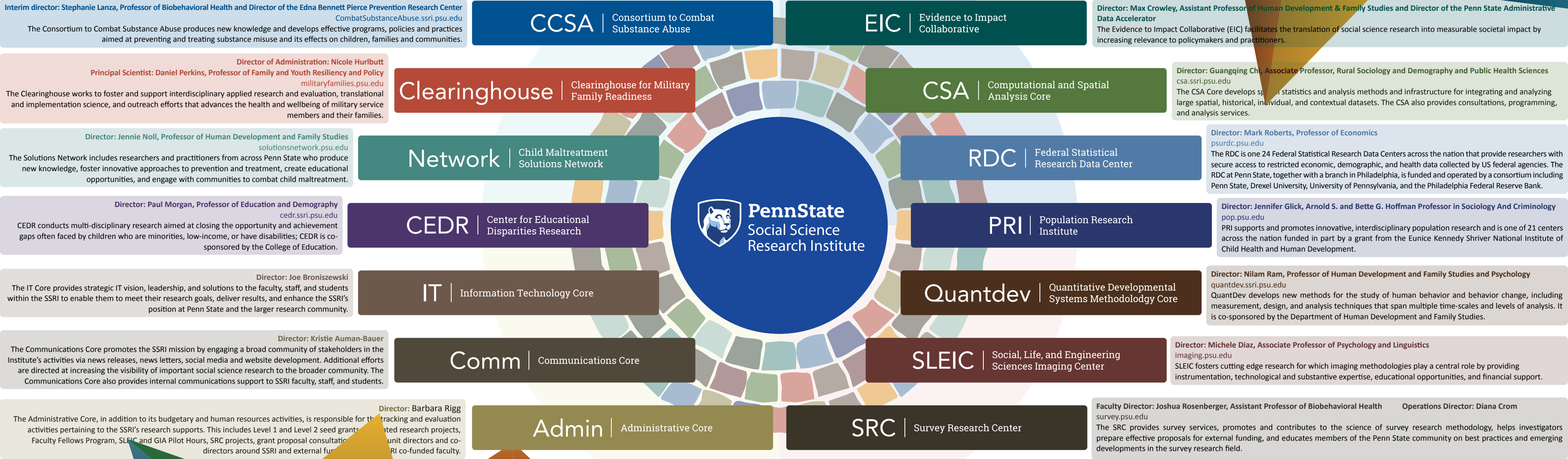
The scientific study of best methods for translating knowledge into policies, programs, practices, and products that achieve broad and sustained uptake and use toward enhancing the health and well-being of individuals, their communities, and the larger society.

Welcome to the Social Science Research Institute

Since its launch in 2001, Penn State's Social Science Research Institute (SSRI) has promoted innovation and excellence in research within the social and behavioral sciences. The Institute's mission is to foster novel, interdisciplinary collaborations that address critical human and social problems at the local, national, and international levels and translate and disseminate this knowledge for measurable human behavior, health, and development outcomes. SSRI advances its mission by bringing together researchers from a range of disciplines around emerging areas of study and by providing consultation, financial support, and shared infrastructure development and services to social and behavioral scientists at Penn State. It is one of seven, cross-university research institutes supported by the Office of the Vice President for Research, including the Institutes for Energy and Environment, Huck Institutes for the Life Sciences, Institute for CyberScience, Materials Research Institute, Clinical and Translational Science Institute, and Penn State Cancer Institute.

Research in the social and behavioral sciences ranges from studies of large-scale social forces, including socio-economic, political, and socio-cultural processes and influences, to dynamics in smaller group settings such as families, school classrooms, and work organizations. It also encompasses research on behavior, ranging from overt actions to underlying psychological processes including cognitive, affective, and motivational functioning. And, there is an emphasis on the role of human behavior in adapting to change, in resilience in the face of challenge, and in effecting change—in the self as well as in the social and physical environments.

SSRI Centers and Institutes (2018-2019)



People in the SSRI (2018-2019)

The Penn State Social Science Research Institute Annual Report 2018 - 2019

EXECUTIVE COMMITTEE

Susan McHale, Ph.D.
Distinguished Professor, Human Development and Family Studies, Professor of Demography

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Professor, Psychology and Pediatrics

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Distinguished Professor, Rural Sociology and Demography

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Distinguished Professor, Biobehavioral Health and Medicine

Danielle Symons Downs, Ph.D.
Professor, Kinesiology and Obstetrics & Gynecology

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Jennifer Glick, Ph.D.
Director, Population Research Institute / Arnold S. and Bette G. Hoffman Professor, Sociology and Criminology

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Director of Administration, Clearinghouse for Military Family Readiness

Stephanie Lanza
Interim Director, Consortium to Combat Substance Abuse / Professor of Biobehavioral Health and Director of the Edna Bennett Pierce Prevention Research Center

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Principal Scientist, Clearinghouse for Military Family Readiness / Professor, Family and Youth Resiliency and Policy

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Director, Federal Statistical Research Data Center / Professor, Economics

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Faculty Director, Survey Research Center / Assistant Professor, Biobehavioral Health

Barbara Rigg
Director, Administrative Core

CO-FUNDED FACULTY

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Associate Professor, Pediatrics

Kristin Buss, Ph.D.
Professor, Psychology

Orfeu Buxton, Ph.D.
Professor, Biobehavioral Health

Soo-yong Byun, Ph.D.
Associate Professor, Educational Theory and Policy, and Demography

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Professor, Human Development and Family Studies

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Associate Director, Child Maltreatment Solutions Network / Associate Professor, Human Development and Family Studies

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Director, Social, Life, and Engineering Sciences Imaging Center / Associate Professor, Psychology and Linguistics

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Assistant Professor, Sociology and Criminology

Jennifer Frank, Ph.D.
Assistant Professor, Special Education, Curriculum and Instruction

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Associate Director, Population Research Institute / Associate Professor, Sociology, Criminology and Demography

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Professor, Human Development and Family Studies

Charles F. Geier, Ph.D.
Dr. Frances Keesler Graham Early Career Professor, Human Development and Family Studies

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Director, Population Research Institute / Arnold S. and Bette G. Hoffman Professor, Sociology, Criminology and Demography

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Assistant Professor of Education

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Child Abuse Pediatrician, Professor of Pediatrics

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Director, Criminal Justice Research Center / Liberal Arts Professor, Sociology and Criminology

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Assistant Professor, Nursing

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Distinguished Professor, Educational Psychology

Jenae Neiderhiser, Ph.D.
Distinguished Professor, Psychology

Jennie Noll, Ph.D.
Director, Child Maltreatment Solutions Network / Professor, Human Development and Family Studies

Carlomagno Panlilio, Ph.D.
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Koraly Pérez-Edgar, Ph.D.
Professor, Psychology

Daniel Perkins, Ph.D.
Principal Scientist, Clearinghouse for Military Family Readiness / Professor, Family and Youth Resiliency and Policy

David Puts, Ph.D.
Associate Professor, Biological Anthropology

Alexis Santos, Ph.D.
Assistant Professor, Human Development and Family Studies, and Demography

Suzy Scherf, Ph.D.
Associate Professor, Psychology

Hannah Schreier, Ph.D.
Assistant Professor, Biobehavioral Health

Idan Shalev, Ph.D.
Mark T. Greenberg Early Career Professor, Biobehavioral Health

Gregory Shearer, Ph.D.
Associate Professor, Nutritional Sciences

Chad Shenk, Ph.D.
Associate Professor, Human Development and Family Studies and Pediatrics

Kenneth Shores, Ph.D.
Assistant Professor, Human Development and Family Studies

Joshua Smyth, Ph.D.
Associate Director, Social Science Research Institute / Distinguished Professor, Biobehavioral Health and Professor of Medicine

Shedra Amy Snipes, Ph.D.
Associate Professor, Biobehavioral Health

Robert Turrisi, Ph.D.
Professor, Biobehavioral Health

Jennifer Van Hook, Ph.D.
Roy C. Buck Professor of Sociology and Demography

Ericka Weathers, Ph.D.
Assistant Professor, Education

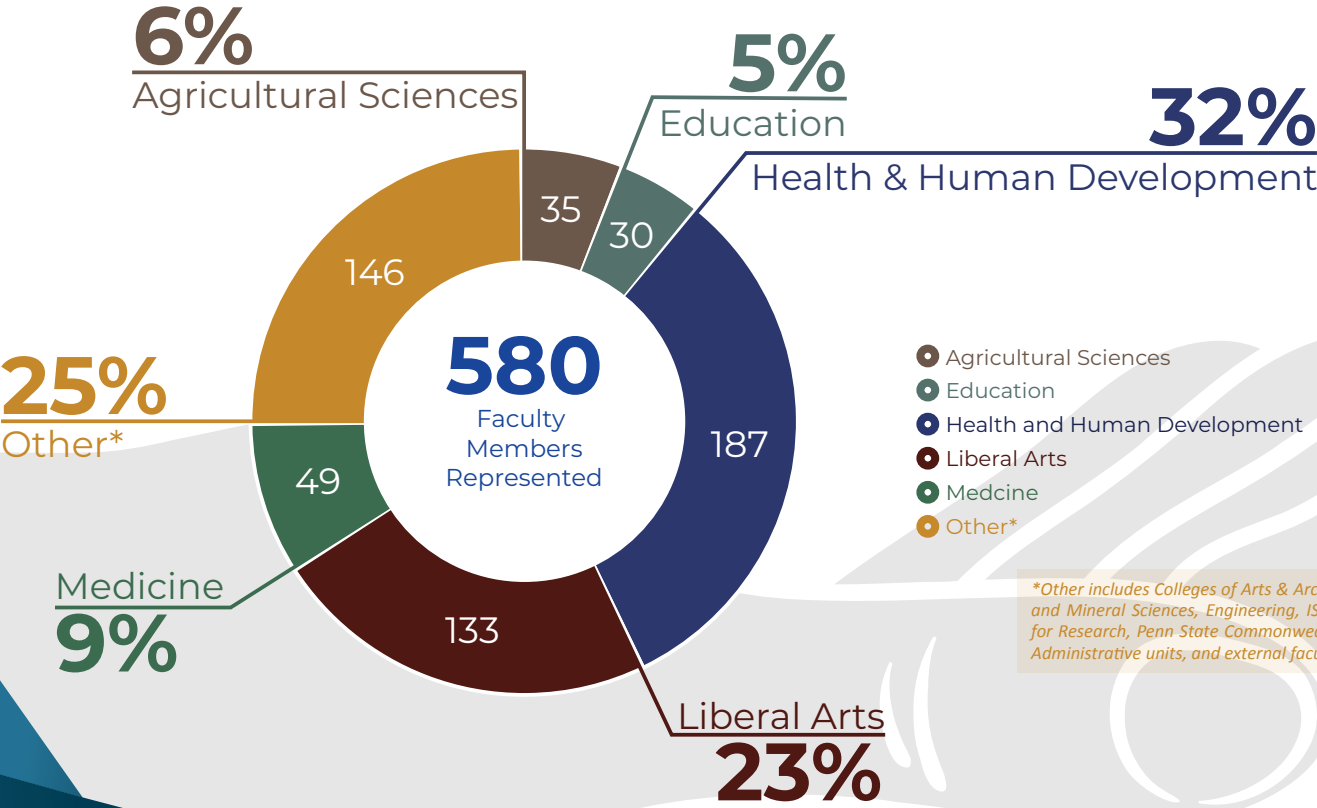
Krista Wilkinson, Ph.D.
Professor, Communication Sciences and Disorders

SSRI by the Numbers (2018-2019)

SSRI CONSULTATIONS

During 2018-2019, SSRI directors met with 580 faculty members. Of these, 559 were affiliated with Penn State. The number of consultations by college is shown below. Overall, there was a 19% increase in the total number of consultations as compared to 2017-2018 (484 consultations). Consultations were broad in disciplinary scope as reflected in 25% of consultations taking place with faculty from “Other” colleges.

SSRI Pre-Award Consultations



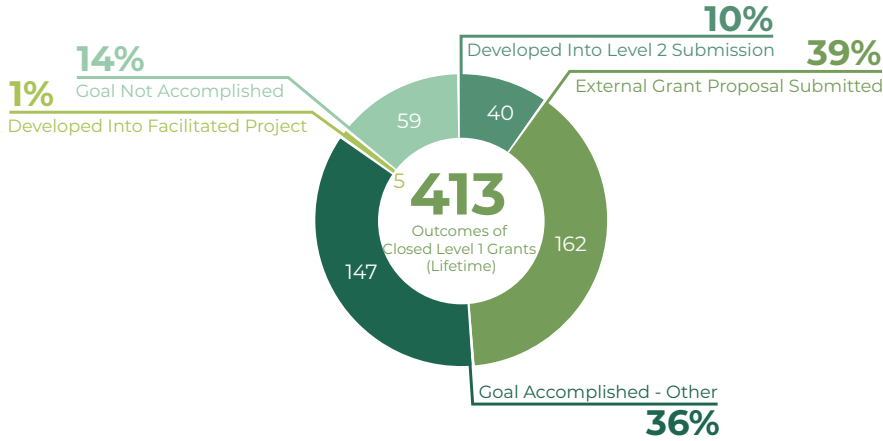
SSRI SEED GRANTS

Here we provide an overview of the outcomes realized by Level 1 and Level 2 seed grants since the inception of the SSRI grant program in 1998. The figures below describe “closed” projects only, i.e. projects that have been completed and are no longer being actively tracked for outcomes.

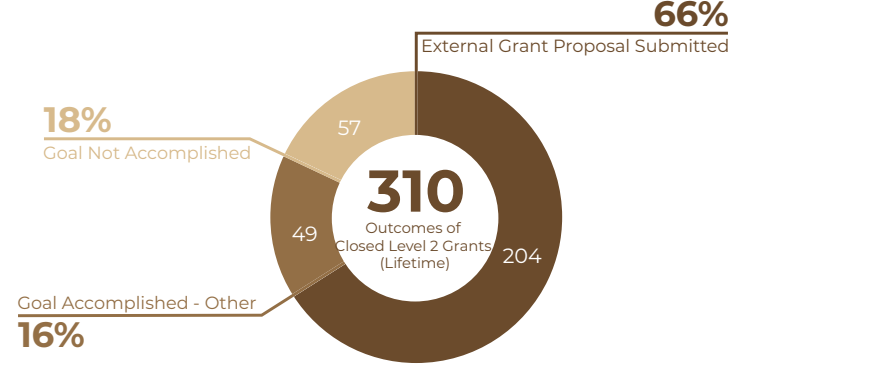
LEVEL 1: As shown below, 413 Level 1 projects were closed as of June 30, 2019, representing a total investment of over \$1.87 million. As shown here, from these 413 projects, 262 external grant submissions resulted, and 108 (41%) of these were funded. Awards from external grants based on Level 1 awards now exceed \$80.3 million. In addition, nearly 10% of Level 1 projects progressed to Level 2 submissions. In most other cases, Level 1 projects were evaluated to have met goals either through establishing networking connections of providing professional development and support. As of June 30, 2019, each \$1 invested by the SSRI in Level 1 projects has yielded approximately \$18.67 of indirect return to the University, a slight increase from the previous year at \$18.22.

LEVEL 2: To date, 310 Level 2 projects have been completed with a total investment of \$5.69 million. From these, Level 2 projects, 367 external proposals were submitted. Of the external proposal submissions, 145 (39%) were funded. The lifetime total grant awards for closed projects as of June 30, 2019 was \$117 million, an increase of nearly 11% over last year’s total. Each \$1 invested in Level 2 projects yields approximately \$6.51 of indirect return to the University, a slight decrease from last year (\$6.64).

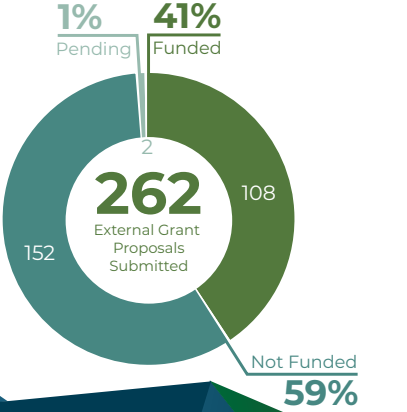
Outcomes of Closed Level 1 Grants (Lifetime)



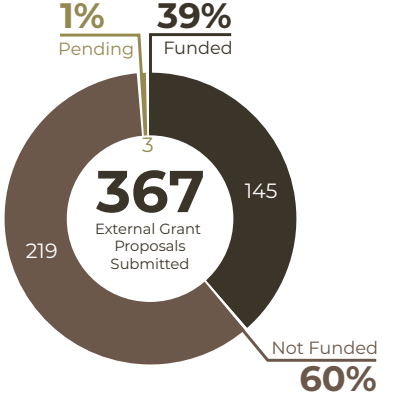
Outcomes of Closed Level 2 Grants (Lifetime)



Level 1 External Grant Proposals Submitted



Level 2 External Grant Proposals Submitted



Strengthening Child Safety and Wellbeing through Integrated Data Solutions

September 27 – 28, 2018

The Child Maltreatment Solutions Network brought together 18 experts from 11 universities for the 7th annual conference on child maltreatment. The event was co-sponsored by The Child Study Center and showcased emerging and innovative approaches in the acquisition and use of data to inform child welfare system solutions. Topics included the impact of geographic locations and how it influences parenting, child welfare interventions, housing struggles, and how to inform public policy and system reform. Other conference sponsors include Penn State's Departments of Public Health Sciences; Educational Psychology, Counseling, and Special Education; and Biobehavioral Health; Colleges of Nursing and Information Sciences and Technology; The Edna Bennett Pierce Prevention Research Center; The Child Study Center; University Libraries; The Clearinghouse for Military Family Readiness; and the Institute for CyberScience.



Envisioning a Future Free from Addiction: Research, Programs, and Practice to Prevent Substance Abuse

April 29, 2019

The Consortium to Combat Substance Abuse held its first annual conference at University Park to acknowledge how substance misuse has affected Pennsylvania and recognize the large, positive impact Penn State can have on the epidemic. Researchers, educators, practitioners and policymakers participated in a community engagement breakfast, round-table networking discussions, and presentations that included Pennsylvania Secretary of Health Dr. Rachel Levine and Congressman Glenn Thompson. Penn State sponsors of the conference included Penn State's Colleges Agricultural Sciences, Communications, Education, Health and Human Development, Nursing, and College of Medicine; Penn State Outreach; Addiction Center for Translation; Center for Applied Studies in Health Economics; Center for Educational Disparities Research; Center for Geriatric Nursing Excellence; Child Maltreatment Solutions Network; Child Study Center; Clearinghouse for Military Family Readiness; Clinical and Translational Science Institute; Evidence to Impact Collaborative; Huck Institute; The Methodology Center; Population Research Institute; Rock Ethics Institute; Edna Bennett Pierce Prevention Research Center; Office of Government Affairs; Penn State Law; and the Office of the Vice President for Commonwealth Campuses.

Rural American Families-Rural Families and Communities

October 22 – 23, 2018

The 26th Annual National Symposium on Family Issues focused on the strategies needed to maintain economic stability, health and general well-being of rural families. The symposium brought together researchers to discuss rural families and directions for the future of rural family research. Researches spoke about the shift of the focus from rural to urban poverty, labor force changes in rural America, opioid use disorder and the lack of data available for researchers to address these complex systems problems. The Symposium is sponsored annually by The Eunice Kennedy Shriver National Institute of Child Health and Human Development. Penn State sponsors include Social Science Research Institute; Population Research Institute; Department of Sociology and Criminology; Clinical and Translational Science Institute; Department of Human Development and Family Studies; Department of Psychology; Department of Agricultural Economics, Sociology, and Education; Prevention Research Center; and the Child Study Center.



Mobile technologies may help researchers crack the mysteries of aging

A National Institutes of Health (NIH) grant will allow Penn State's Martin Sliwinski and team to learn more about how small changes in the brain can develop into neurological conditions later in life by developing new standardized mobile technologies for researchers across the U.S.

This type of research may offer new insights that are critically important for developing prevention measures and that may help improve quality of life for older adults and their families.

"Using these new technologies, we'll be able to obtain high-precision data about the mental and cognitive function of research study participants in the context of their everyday lives," said Sliwinski, Gregory H. Wolf Professor of Aging Studies and lead investigator on the project. "This allows us to gather data as people go about their everyday lives, which goes beyond what we can already do in a lab."

For example, study participants can open the smartphone app, enter information about their stress levels, and then play a brain game, allowing researchers to measure their cognition and study how stress affects brain function. This replaces the need for participants to make multiple trips to a lab or clinic, which can be costly.

"If you need 1,000 participants for a study, it gets very expensive very quickly," Sliwinski said. "So by using

this new infrastructure to put a lab on everyone's smartphone, we can overcome these limitations and make it affordable to do well-powered and strong biomedical science focused on cognitive and brain health."

Sliwinski said that while some researchers are using mobile technologies to gather data for their studies, there's no standardized software or set of best practices. Under this new grant, he and the other researchers will team up with the company Sage Bionetworks to build this infrastructure. Lara Mangravite, a Penn State alumna, is president of Sage Bionetworks.

"We'll be designing a suite of tools that are ready for scientists to begin using immediately in their research, with no programming or technical knowledge needed on their part," Sliwinski said. "But it will also be a code base that can be built upon if a researcher needs to customize and tailor it to fit their work. We want other labs to be able to innovate these tools and make them their own."

Neil Sharkey, vice president for research at Penn State, said the work will help set the standard for mobile cognitive health research.

"This innovative work by Dr. Sliwinski and his team is addressing a critical need for the next generation of early intervention and prevention efforts to slow or prevent cognitive decline," said Sharkey. "This recognition from the NIH demonstrates utmost confidence in Dr. Sliwinski's team and our institution, and this work holds the promise to offer a unique new way to collect data."

Kathryn Drager, associate dean of research and graduate education in the College of Health and Human Development, stressed the relevance and importance of the work in Pennsylvania, which has the second highest percentage of residents 65 or older in the nation.

"Aging is an issue that impacts every single one of us, so the results of this work could help all of us better understand the effects of everyday occurrences on our health," Drager said. "By committing to this line of research, we continue to put health and well-being at the forefront of our efforts."

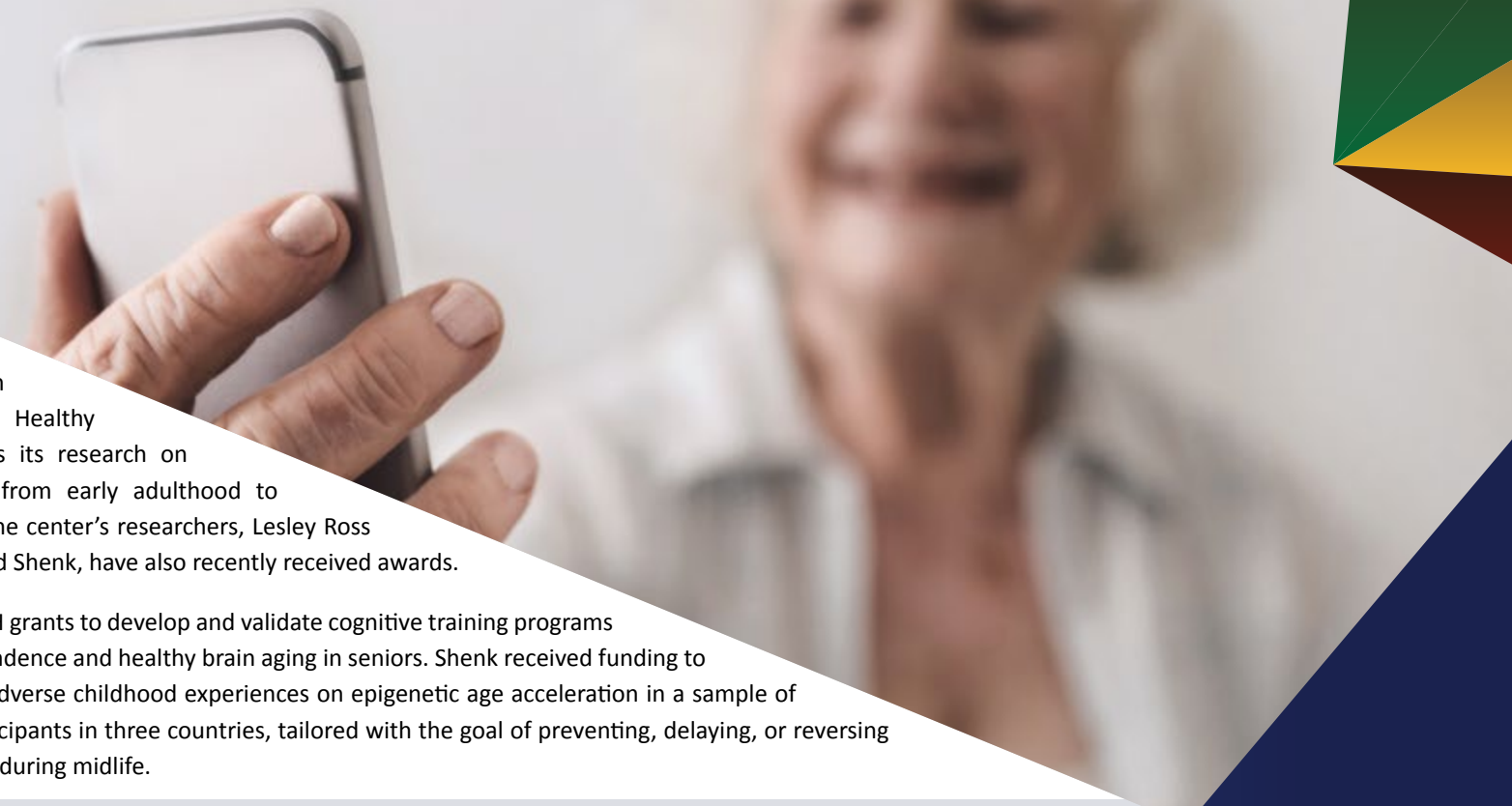
Sliwinski is also the director of Penn State's Center for Healthy Aging, which focuses its research on adult development, from early adulthood to older years. Two of the center's researchers, Lesley Ross and SSRI co-fund Chad Shenk, have also recently received awards.

Ross received two NIH grants to develop and validate cognitive training programs that promote independence and healthy brain aging in seniors. Shenk received funding to study the effects of adverse childhood experiences on epigenetic age acceleration in a sample of more than 3000 participants in three countries, tailored with the goal of preventing, delaying, or reversing these adverse effects during midlife.

Penn State faculty from five departments will join the mobile cognitive health team: Scott Yabiku, professor of sociology and demography; Vernon Chinchilli, distinguished professor and chair of public health sciences; Joshua Rosenberger, assistant professor of biobehavioral health; Joshua Smyth, distinguished professor of biobehavioral health and medicine and SSRI associate director and co-fund; Lesley Ross, associate professor of human development and family studies; Zita Oravec, assistant professor of human development and family studies; and Jonathon Hakun, assistant teaching professor of psychology.

The team also includes researchers from Mclean Hospital, Washington University in St. Louis, Oregon Health Sciences University, the University of Victoria, scientists from the National Institutes of Health, and Sage Bionetworks.

By Katie Bohn



Strategic Research Themes

 The Human System

 Smart and Connected Health



Martin J. Sliwinski, Ph.D.

Professor,
Human Development and Family Studies

Regular bedtimes and sufficient sleep for children may lead to healthier teens

Having a regular, age-appropriate bedtime and getting sufficient sleep from early childhood may be important for healthy body weight in adolescence, according to researchers at Penn State.

The researchers identified groups of children by self-defined bedtime and sleep routines and tested longitudinal associations for each group with adolescent body mass index (BMI). The findings suggest that childhood bedtime and sleep routine groups predict adolescent sleep patterns and BMI.

In a national study of urban households, only one-third of children consistently adhered to age-appropriate bedtimes for ages 5 through 9. Those who had no bedtime routine at age 9 had shorter self-reported sleep duration and higher BMI at age 15, when compared to children with age-appropriate bedtimes (after adjusting for age 3 BMI).

“Parenting practices in childhood affect physical health and BMI in the teenage years. Developing an age-appropriate routine in childhood is crucial for the future health of the child,” said co-author Orfeu Buxton, professor of biobehavioral health at Penn State, and director of the Sleep, Health, and Society Collaboratory and SSRI-cofund at Penn State. “We think sleep affects physical and mental health, as well as the ability to learn.”

Bedtimes should be determined by various factors, such as when the child has to wake up based on the time it takes for that child to get ready for school, and the time it takes to get to school, as well as the school start time. School start times aren’t determined by parents, but bedtimes and bedtime routines can be adjusted by parents, suggests Buxton.

“Giving children the time frame to get the necessary amount of sleep is paramount,” Buxton said, as achieving recommended duration of sleep can have an impact on BMI in adolescent years, according to the findings.

Bedtime should provide enough of a “window” for the child to get an appropriate amount of sleep, even if the child doesn’t fall asleep right away, said Buxton.

This study supports existing pediatric recommendations that having a regular and age-appropriate bedtime is important for children’s health, said lead author Soomi Lee, now assistant professor of aging studies in the College of Behavioral and Community Sciences at the University of South Florida. Lee, who was at Penn State at the time of the study, received her doctorate in human development and family studies, and was a post-doctoral fellow in biobehavioral health, at Penn State.

Additionally, the study shows continuity in sleep behaviors, Lee said, in that those who had the best bedtime and sleep routines during childhood also had sufficient sleep duration in adolescence, whereas those with suboptimal bedtime and sleep routines had insufficient sleep duration in adolescence.

Researchers analyzed longitudinal data from the Fragile Families and Child Wellbeing Study, a national cohort from 20 United States cities, with 2,196 subjects.

Childhood bedtime and sleep routines were assessed by mothers’ reports of their children’s timing of bedtimes, adherence to bedtimes, and habitual sleep duration at ages 5 and 9. At age 15, these adolescents reported their height and weight, which were used to calculate BMI.

Lee said the study highlights the importance of educating parents in bedtime parenting, especially for those in low-income households.

“In our sample that includes a large proportion of low-income, low-education, and ethnic minority households, less than one third of children had age-appropriate bedtime routines at age 5 and 9,” Lee said. “This raises a concern about development and health of children in disadvantaged

households. Future family interventions should include parental educations about sleep health, particularly focusing on parents with low income and low education.”

Additionally, future studies should focus on whether childhood sleep behavior interventions promote healthier sleep and weight in later life course stages, said Lee.

This research was supported by the Eunice Kennedy Shriver National Institute of Child Health and Human Development of the National Institutes of Health.

Additional authors include Anne-Marie Chang, assistant professor of biobehavioral health, and Nicole Nahmod, research assistant in the Department of Biobehavioral Health at Penn State and graduate student in public health and physician assistant studies, Arcadia University; Lindsay Master, research assistant in the Department of Biobehavioral Health at Penn State and graduate student in statistics at Penn State; Lauren Hale, professor of preventative medicine at Stony Brook University; and Lawrence Berger, director of the Institute for Research on Poverty and School of Social Work at the University of Wisconsin-Madison.

By Marjorie S. Miller



Orfeu Buxton, Ph.D.

Professor,
Biobehavioral Health

SSRI Cofunded Faculty Member

Strategic Research Themes



The Human System

Clearinghouse evaluates veterans' use of transition program

There are more than 20 million military veterans in the United States, and that number is projected to grow rapidly over the next several years. Some veterans take advantage of the many public and private programs and services created to help them reintegrate into civilian life. Yet, little is known about which programs and services are being used by veterans or what factors predict their use or non-use of these resources.

A Penn State-led research team is analyzing these programs and services as part of “The Veterans Metrics Initiative: Linking Program Components to Post-Military Well-Being” research study (TVMI Study). The TVMI Study is a public-private collaboration led by the Henry M. Jackson Foundation for the Advancement of Military Medicine (HJM).

TVMI Study researchers, including those from the Clearinghouse for Military Family Readiness at Penn State, are collecting information from recent veterans over three years to understand veterans' use and non-use of community-based resources, organizations and the Veterans Administration, all of which assist veterans to make healthy transitions from military to civilian life.

According to lead author Daniel Perkins, founder and principal scientist at the Clearinghouse, the good news about veterans that is often overlooked is that “the majority of veterans do not have negative experiences as they adjust to civilian life, rather they make a successful transition back to their communities.” However, a significant number of veterans report they have difficulty with reintegration challenges.

“Some veterans face obstacles to obtaining employment and furthering their education, or have legal, financial and housing problems, along with ongoing mental and/or physical health conditions, and relationship difficulties,” Perkins said.

Tens of thousands of public and private programs were created to address

these needs, but it is not known which of these programs and services veterans use, nor has previous research examined what predicts use or non-use of programs and services designed to help address the broad range of challenges new veterans encounter. This study was the first to ask new veterans to provide information on their use of community-based and Veterans Administration (VA) programs and services they accessed to support their transition to civilian life. Approximately, 50,000 veterans were identified and sent an online survey, and nearly 10,000 veterans completed it.

Approximately 65 percent of veterans said they used at least one program to enhance their well-being, and approximately 35 percent reported using multiple programs across various domains of well-being. Veterans primarily sought assistance for employment and educational advancement. To a lesser degree, they sought assistance for legal/financial/housing, health, and social functioning challenges.

Veterans who served at the junior enlisted ranks were much less likely to use programs and services than those from the higher enlisted and officer ranks. According to Keith Aronson, associate director of the Clearinghouse and one of the co-authors, “The findings from this study suggest that veterans, particularly those from the junior enlisted ranks, need better education about their VA benefits and more robust outreach from community-based organizations.”

Other Penn State researchers on the project are Nicole R. Morgan, research and evaluation scientist, and Julia A. Bleser, research and evaluation associate, both at the Clearinghouse.

Strategic Research Themes



Social Disparities



The Human System



Daniel Perkins, Ph.D.

Professor,
Family and Youth Resiliency and Policy

SSRI Cofunded Faculty Member

Penn State forms addiction legal resources team at Dickinson Law

With the number of opioid overdose deaths continuing to rise in Pennsylvania, a group of Penn State Dickinson Law faculty and students are becoming advocates and providing resources for those who are affected by addictions.

Led by Matthew Lawrence, assistant professor of law at Dickinson Law and assistant professor in the Department of Surgery at Penn State College of Medicine, the group of six students is working to develop and disseminate legal resources, promote informed policy making, and facilitate scholarly research in the states of Pennsylvania, West Virginia, Ohio, North Carolina, Rhode Island and Florida.

“The project, called the Addiction Legal Resources Team (ALRT), had its genesis in a paper I wrote exploring legal barriers families face when trying to advocate for a loved one who has substance use disorder,” said Lawrence. “While conducting a search for a research assistant to continue this work, I was overwhelmed by student interest in finding outlets to contribute to address the crisis. Several of our law students had a personal connection with the opioid crisis or work experience with addiction programs in their home states.

With the support of Dickinson Law Dean Gary Gildin, Lawrence was able to support six part-time students. “Thanks to their passion, experience, and home-state connections, the team exceeded my expectations and developed several meaningful efforts in a short amount of time. They’ve also inspired my own scholarship in this area,” Lawrence said.

ALRT student team members Bryan Caffrey, Andrea Jenkins, Evan Marmie, Tori Remington, Alex Short and Wyatt Weisenberg worked on various projects in each of their home states. Team members disseminated and developing legal resources for patients and families navigating the legal system to assist them with obtaining insurance coverage for addiction treatment. They also advised Penn State researchers on legal questions encountered in their research. The team meets weekly, with some students using Dickinson Law conference rooms to videoconference with the rest of the team to discuss projects, deadlines and



Matthew Lawrence

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Law of Dickinson Law

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College of Medicine

Strategic Research Themes



Dissemination and
Implementation Science

new collaborations. Students then pursue individual projects during the week.

“The students are working together and with me to chip away at the issue and do something helpful. One major focus has been on insurance coverage for treatment, specifically resources related to the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA),” explained Lawrence. MHPAEA is a federal law that ensures group health plans and health insurance issuers who provide mental health or substance use disorder benefits offer coverage that is comparable to medical/surgical benefits coverage. Many individuals affected by substance use disorder are unfamiliar with the law and the challenging appeals process when receiving an insurance coverage denial.

“Our goal as a team is to research and present information for individuals or their family members who might be suffering from substance use disorder, helping them find medical treatment and navigate a rather convoluted regulatory landscape,” said ALRT student team member Bryan Caffrey.

The students also conduct legal research in each of their home states and are developing policy memos for dissemination to scholars and collaborators. For example, they are sharing their work with the Parity of 10 project, which advocates for the MHPAEA in mental health and drug abuse cases.

The program has been a beneficial educational experience for the students as well.

“One thing I’ve learned that is very important when it comes to researching health care policy and implementation is the way that the administration of statutes comes into effect. It’s not simply enough to look at statutes, which might be natural for law students, but also look to how administrative agencies and corporations that administer healthcare have turned those statutes into actual practical policies that affect people every day in their lives,” Caffrey said.

Another student wrote a policy memo regarding several state and local programs and Lawrence encouraged him to circulate it more broadly. The memo ultimately appeared on Harvard Law School’s Bill of Health blog, and that student has been invited to contribute additional memos to the blog.

“The project has led to the students thinking more about the community side of the addictions crisis, focusing on families and how to outreach and apply our legal research,” said Lawrence. “I can’t emphasize enough how much this effort has been inspired and driven by this passionate and talented group of students and what a privilege it has been to work with them. We are looking forward to continuing the addiction legal resources team’s work into the fall semester and beyond.”

ALRT project supporters and collaborators beyond Dickinson Law include Parity at 10, Partnership for Drug Free Kids, Legal Action Center, Partnership for Better Health PA’s Opioid Prescribing Task Force, Penn State College of Medicine’s Department of Public Health Sciences and Department of Surgery, and the SSRI.

Sterner awarded \$2.7M to help fight opioid crisis

A Penn State Abington faculty member was instrumental in securing three grants totaling more than \$2.7 million to combat the opioid epidemic in Pennsylvania and nationwide.

Glenn Sterner, assistant professor of criminal justice at Abington and an expert on the illicit use of opioids, said the awards will enhance opportunities to fight opioid addiction through supply side, data-based interventions and increased connection with prevention strategies.

“We are continuing to expand our efforts to address the opioid epidemic, and through these grants we will be working collaboratively with colleagues across campuses, universities, and disciplines, and with community partners, to take on this serious issue,” Sterner said.

“We have an incredible group of people dedicated to making impact in our communities through these funded projects.”

Sterner is the principal investigator on the first grant, which was funded for \$683,000 by the federal Department of Justice/Bureau of Justice Assistance. Sterner will partner with the Pennsylvania State Police to use data to identify and disrupt the opioid networks in several Pennsylvania counties including Adams, Cumberland, Dauphin, Franklin and Perry, and encompassing sections of three major interstates/

highways (I-83, I-81 and I-76), which are known drug-trafficking corridors.

The project aims to synchronize innovative, technology-driven enforcement strategies that leverage information received through community input. There are several components to the program, including targeted enforcement and public outreach. The state will collaborate with research partners at Penn State, who will evaluate the program’s effectiveness utilizing measurable performance metrics.

The second grant, funded by the National Institute of Justice, provides \$725,000 to a team coordinated by Iowa State University that includes Sterner. It focuses on building intelligence networks to combat the opioid crisis in rural communities across the nation.

“We are working across multiple locations in Iowa, Missouri and Pennsylvania, among others, to assist rural counties so they can address these issues,” Sterner said. “We are teaming with local police in our rural communities to increase the capacity for intelligence-based intervention to address drug distribution. This model could be replicated in other places.”

The third grant for almost \$1.1 million is funded by the Substance Abuse and Mental Health Services Administration. The grant project, of

which Sterner is a member, connects supply interruption and prevention to address opioid misuse in Pennsylvania.

“We are developing the infrastructure to coordinate supply-based interventions and prevention-based initiatives in communities for K-12 students and their families,” Sterner said. “It’s a way for us to tackle both supply and demand for illicit substances in our communities.”

Sterner also applies his expertise as a member of the PA State Opioid Overdose Task Force and as an affiliate of Penn State’s Criminal Justice Research Center. Sterner is also the founder of the Share Your Opioid Story initiative.

Strategic Research Themes



Social Disparities



Smart and Connected Health



Glenn Sterner

Assistant Professor,
Criminal Justice at Abington

Affiliated Faculty of the Criminal Justice
Research Center

New partnerships take Quality Talk to classrooms in Taiwan, South Africa

After seeing success in K-12 classrooms in the United States, Quality Talk, an empirically supported instructional approach, now will help students in international classrooms achieve academic success.

Developed in 2002 by P. Karen Murphy, distinguished professor of education (educational psychology) and SSRI cofunded faculty member, Quality Talk is designed to promote high-level comprehension and teaches students to generate oral arguments via small-group discussions. The approach has been used primarily in language arts and science classrooms but can be adapted to multiple content areas across all grade levels. It consists of four major components: instructional frame, discourse elements, teacher modeling and scaffolding, and pedagogical principles.

“In 2015, my research team was awarded a small research grant from National Taiwan Normal University’s (NTNU) Learning Sciences Consortium to translate some of our Quality Talk materials into Mandarin to increase accessibility for various faculty at NTNU,” Murphy said. She noted that the grant was awarded after she presented the Quality Talk model at a conference held in Taipei, Taiwan.

After the material was translated, NTNU faculty became more interested in the approach and in early 2016, Murphy, along with College of Education Dean David Monk, was invited by NTNU Executive Vice President Yao-Ting Sung to visit the university. The invitation came on the heels of a long-established relationship between the College of Education and NTNU.

“I gave a workshop to NTNU faculty and graduate students on Quality Talk, with specific attention to the implementation of the approach and how it might be executed at the university-level in college classrooms,” she said. “We were overjoyed to learn that several

faculty had already begun small pilot projects using Quality Talk in their English-language courses.”

Many of the educators who piloted the approach later presented their results at the 4th annual International Workshop on Advanced Learning Sciences (IWALS), where Murphy and Monk served as keynote speakers in the summer of 2016. Since then, Murphy and her team of researchers, which includes Carla M. Firetto, Ana M. Bulter, Liwei Wei, Mengyi Li and Rachel Croninger, have worked closely with Joyce Chao-chen Chen, vice president for academic affairs and professor of the Graduate Institute of Library and Information Studies at NTNU, to continue translating Quality Talk into a more culturally meaningful intervention that includes examples and guides for both educators and students.

“The goal is to use Quality Talk as a pedagogical tool in all English and ancient Chinese courses for undergraduate students at NTNU,” Murphy said. “The amazing faculty at NTNU are not just implementing Quality Talk, they are studying its impact and refining the approach to maximize its utility and effectiveness.”

The results of those initial studies will be published in two upcoming books — one which will focus on the implementation of Quality Talk in English language courses, and the other, which will be written in Mandarin, and focus on the use of the approach in NTNU’s ancient Chinese courses.

In addition to working with faculty and students at NTNU, Murphy also has provided professional development workshops to nearly 100 teachers from local schools in Taipei. This has led NTNU feeder schools to express interest in learning more about how Quality Talk can be used to help improve the reading comprehension of high school and elementary-age students. Vice President Chen’s goal is to encourage local feeder schools in Taipei to implement Quality Talk, Murphy said.

But Murphy and the Quality Talk team haven’t stopped there. In addition to promoting Quality Talk in the United States and Taiwan, the researchers also are collaborating with faculty and students at the University of Pretoria in South Africa.

South Africa has 11 recognized national languages, Murphy said, although English is used as the primary language for instruction in schools. “Like our NTNU partnership, language is a key focus and Quality Talk is being used as a mechanism to promote oral fluency as well as verbal and written thinking and reasoning through discourse,” she said. “In the end, the ultimate goal is to enrich teachers’ and students’ pathways to resilience through enhanced teaching and learning.”

In the 16 years Murphy has been continually developing and refining Quality Talk, she never imagined the global impact it could have. And she said she is grateful for the many opportunities the College of Education has afforded her and her team to expand the model on an international level.

“For our team, collaborating with faculty and students at NTNU and the University of Pretoria has opened a whole new world of possibilities for Quality Talk. We never dreamed that such collaborative partnerships would even be a possibility,” she said. “I’m hopeful and optimistic that participation in Quality Talk discussions will enrich students’ reasoning, enhance their comprehension and fluency, and promote critical-analytical thinking about, around and with text and content.”

Funding for the project was provided by the National Taiwan Normal University’s (NTNU) Learning Sciences Consortium and the Harry and Marion Royer Eberly Faculty Fellowship.

By Jessica Buterbaugh

Strategic Research Themes



Innovative Methods



P. Karen Murphy

Distinguished Professor,
Education (Educational Psychology)

SSRI Cofunded Faculty Member

Using social media to solve social problems

Social scientists rely on data to study social problems. However, data from traditional surveys can be difficult and time consuming to collect. A National Science Foundation-funded Penn State project will evaluate whether using Twitter data can be used to actually represent populations across different demographic groups.

According to principal investigator Guangqing Chi, associate professor of rural sociology and demography and public health sciences in the Department of Agricultural Economics, Sociology, and Education, and a Social Science Research Institute (SSRI) co-funded faculty member, Twitter data are generated by a large number of people in real time, are rapidly growing and easily accessible data form, and are drawing interest from many research disciplines.

“Twitter data have great potential for understanding population dynamics, however, the use of the data has been resisted by social scientists, largely because we know little about the users’ demographic characteristics,” said Chi.

Chi, who also serves as director of the Computational and Spatial Analysis Core of the SSRI and Population Research Institute, and his team aim to make Twitter data useful for social science research by evaluating how Twitter users represent — or

misrepresent — the population and will develop and test data weights that, when applied to Twitter data, will make the results more representative of the population as a whole.

Researchers on the three-year, \$500,000 project will compile geotagged tweets from 2014 to 2017 and compare the data to county census data in the U.S. The team will refine existing methods to determine demographics such as age, sex and race/ethnicity, and use these values to predict county-wide characteristics. The team will also determine if Twitter data can be used to estimate migration at the county level by comparing them to the Internal Revenue Service migration data, and to estimates of Puerto Rico migrants to the continent after Hurricane Maria.

“If Twitter data can achieve high levels of validity, it will be a breakthrough for using Twitter data for population research and will significantly advance population science,” according to Jennifer Van Hook, Roy C. Buck Professor of Sociology and Demography and SSRI co-fund. In addition, the work will be documented so that the researchers’ methods can be applied to other forms of social media.

The research will also enable demographers and sociologists to strengthen research in many other social science disciplines that use demographic data. For example, it could have a direct and significant impact on small-area population estimation and forecasting by providing real-time estimates of population demographics for small-scale geographies, which in turn could have many applications, such as enhancing

emergency
management and
disaster response.

Other researchers on the project include Eric Plutzer, professor of political science; Heng Xu, associate professor of information science and technology; Junjun Yin, research associate; and Don Miller, research analyst/programmer, all at Penn State.

Seed funding for the project was provided by SSRI, the Population Research Institute, and Institute for CyberScience.



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Strategic Research Themes

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-  Social Disparities
-  Smart and Connected Health

Keeping kids on task in school may start at home

The transition to kindergarten can be a challenge for children who have trouble paying attention and can result in behavioral problems and poor academic achievement. A team led by researchers at Penn State is analyzing task persistence and how parents can influence it in early childhood.

Task persistence — the ability to sustain effort towards a task-oriented goal over time — is an important aspect of self-regulation in early childhood. It is a component of effortful control, which involves suppressing impulses and focusing on teacher-directed tasks.

Erika Lunkenheimer, associate professor of psychology, associate director in the Child Maltreatment Solutions Network, and SSRI cofunded faculty member, coordinated a research team to investigate how children complete tasks with their parents and caregivers before school begins and to see if these behaviors carry over into the school setting. The research

was published recently in the Journal of Abnormal Child Psychology.

“Considering their consequences for child development, it is necessary to better understand teacher-rated attention problems early in a child’s academic life,” Lunkenheimer said. “Unfortunately, we know relatively little about how task persistence fluctuates in real time and whether it predicts later attention problems.”

Additionally, previous research largely focused on mother-child interactions. However, the researchers wanted a better understanding of task-persistence patterns with both mothers and fathers to see if they could predict how children apply task persistence in other caregiver-directed areas such as school. “We wanted to understand moment-to-moment changes in task persistence and how they were influenced by parenting behavior and child temperament,” said Lunkenheimer, who is also a Social Science Research Institute co-funded faculty member.

The researchers studied 227 children and their parents and teachers. They assessed the children at ages 3 and 5 by doing a three-hour home assessment, along with interviews with parents and questionnaires with both teachers and parents.

Observations of child negative emotion, parental praise and directive statements, and child task persistence were derived from the coding of a videotaped interaction task in which parents and children worked together to recreate three block designs using four plastic cubes.

After evaluating the results, Lunkenheimer and her team found that task persistence was related to concurrent child and parent factors and later kindergarten problems.

“We found that children who started tasks low in persistence, whether they increased in persistence over time or remained low throughout the task, were perceived by their teachers as having more attention problems,” Lunkenheimer explained. “We also discovered that children who started out with lower persistence and who had higher verbal skills were able to improve, but required more maternal direction and were still perceived by their teachers as having more difficulty.”

The researchers also found that children demonstrated higher persistence with mothers than with fathers, and that more praise from fathers and lower expression of negative emotions by children were associated with high persistence in tasks with fathers. “We suspect that moms and dads play different roles in helping to socialize their children. Since not a lot of research has been done on father-child interactions, this is an important finding,” said Lunkenheimer.

The research has important implications, as it could inform parent and caregiver training programs to better prepare children for kindergarten and help parents and teachers improve children’s task persistence and attention in school.

Other researchers on the project are Carlomagno Panlilio, assistant professor of education and SSRI co-funded faculty member, Penn State; Frances M. Lobo, doctoral student in developmental psychology, Penn State; Sheryl L. Olson, professor of psychology, University of Michigan; and Catherine M. Hamby, doctoral student in developmental psychology, Penn State.



Erika Lunkenheimer

Associate Professor,
Psychology

Associate Director,
Child Maltreatment Solutions Network

SSRI Cofunded Faculty Member

Strategic Research Themes



The Human System

New research to identify what makes conversations supportive

People going through hard times often find assistance by talking about their problems with others, and the support people receive has documented health benefits. However, the quality of support can vary, and what happens during conversations can determine whether or not the support is actually beneficial.

In a new three-year project funded by the National Science Foundation, researchers from Penn State, the University of Mississippi and the University of Minnesota aim to clarify how conversations about everyday stressors convey support and how they lead to different emotional outcomes.

According to Denise Solomon, co-principal investigator and professor of communication arts and sciences at Penn State, previous research has focused either on stand-alone, brief support messages or on perceptions of supportive conversations as a whole.

“What is missing is an understanding of how messages unfold over the course of a conversation to regulate the emotions of a person in distress,” said Solomon. “Our project will focus on studying the conversation linkages between one person’s supportive messages and the other person’s cognitive and emotional responses in an effort to map those dynamic patterns.”

The researchers will analyze data from four previous studies involving 461 video-taped conversations in which one person discloses a stressor to another person, who provides verbal support and assists in the coping process. The research will develop and test a theoretical model that examines how variations in these interactions lead to differences in the distressed person’s thoughts and feelings as expressed through language during the conversation and also reported after the interaction.

To identify speech acts that positively and negatively affect emotion regulation, the researchers will focus on verbal response modes (VRM) to capture eight mutually exclusive categories of speech acts that are defined by the form and intent of a speaker’s individual utterances. To reveal the distressed person’s thoughts and emotions in response to particular VRMs, their speaking turns will be analyzed using a linguistic inquiry and word count (LIWC) program.

“The goals of the analysis will be to identify clusters of speech acts within conversation “turns” and to test

associations between the support provider’s speaking turns and the distressed person’s emotion regulation as these unfold over the course of the conversations,” said Nilam Ram, professor of human development and family studies and psychology. “We will be breaking down video recordings of conversations, utterance by utterance, and turn by turn, and developing a tool kit of analytical strategies to show how emotional and cognitive processing can be affected dynamically during a conversation.”

The researchers predict that individuals who receive effective support messages will leave the conversation with a new understanding of their problem and in an improved emotional state.

“Importantly, though, it’s not enough for a partner to simply provide good support. We expect the most positive outcomes to occur when a distressed person receives high-quality support messages and is responsive to those messages as they occur during the interaction,” said Solomon. “Conversely, we expect that being unresponsive to high-quality support won’t lead to emotional improvement, and receiving and responding negatively to low-quality support will

increase the negative consequences of receiving poor support.”

Solomon hopes that their findings have the potential to assist those who are support providers and will lead to research explaining why some people or relationships show more or less responsiveness during supportive conversations.

“The novelty in this research is mapping responsiveness within interactions onto important conversational outcomes, which opens the door to new questions about why those patterns differ between people and between relationships. We also envision that the tool kit we develop can be used to illuminate the dynamics of other types of consequential conversations, such as in conflict negotiations or attempts to influence a partner’s health behavior.”

Ram, who is also director of the Quantitative Development Systems Methodology Core, part of the Social Science Research Institute, is conducting the analysis of the coding. Other researchers on the project include co-principal investigator Graham Bodie, visiting professor of integrated marketing communications at the University of Mississippi; Susanne Jones, associate professor of communication studies at the University of Minnesota; and Peter Molenaar, distinguished professor of human development and family studies at Penn State.

Denise Solomon

Professor,
Communication Arts and Sciences



Nilam Ram

Director,
Quantitative Developmental Systems
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Professor,
Human Development and Family Studies,
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Strategic Research Themes



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