



Psychological, Health & Learning Sciences

2016-2017

IMPACT REPORT

Psychological, Health & Learning Sciences

Doctoral Programs

Ph.D. in Counseling Psychology

Ph.D. in Measurement, Quantitative Methods & Learning Sciences

Ph.D. in School Psychology

Master's Program

Master of Education in Counseling

Bachelor's Programs

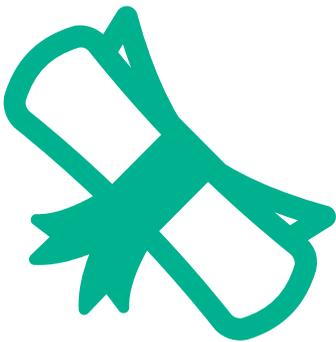
B.S. in Health

B.S. in Human Development & Family Studies



20

The number of doctorate degrees awarded by the
Department of Psychological, Health
& Learning Sciences in 2016.



233

The number of undergraduate degrees the
Health and Human Development & Family
Studies programs awarded in 2016.

School-Based **Research**

STRONG FOUNDATIONS MAKE BRIGHT FUTURES



Before a child can grow up to become a doctor, an astronaut or a Nationally Certified School Psychologist, they must learn to read and write, skills that form the foundation of their future academic and professional success.

Professor Jorge E. Gonzalez and Associate Professor Milena A. Keller-Margulis of PHLS' School Psychology program have dedicated their careers to studying these foundational skills. Gonzalez's work focuses on the development, causes and correlates of early language and literacy difficulties in young children, especially English language learners. Keller-Margulis studies the technical adequacy and effectiveness of universal screeners, including written expression.

"Reading and writing both have precursor foundational skills that, if not in place, can contribute to long-term difficulties that are remarkably resistant to intervention," Gonzalez said. "Without the ability to read and write, you are at a real disadvantage."

Shared-Book Reading

The processes by which children learn to read and write are in motion before they attempt to read their first sentence or pick up an oversized pencil. It's this process that interested Gonzalez.

With Institute of Education Sciences (IES) grant support, Gonzalez and colleagues at Texas A&M University developed Project World, a multi-year study of how best to promote and accelerate children's vocabulary – especially those children for whom English is a second language.

"Many of these children enter pre-school already language delayed by one or two years in English – which we expect if they're Spanish-speaking children – but they're also delayed in Spanish," he said.

Previous research has shown that shared-book reading is an effective strategy for expanding a child’s vocabulary. This type of interactive reading promotes children’s vocabulary growth through exposure to varied and sophisticated words they’re unlikely to encounter in ordinary interactions, Gonzalez said. Adult questioning during shared-book reading is an effective strategy to engage children in verbal exchanges and foster learning of new words. The key to realizing the full benefits of shared-book reading lies in providing detailed and varied instruction across multiple exposures to new words. This practice has a significant effect on word learning and increases the likelihood that these words will be understood and retained.

Written Expression Screeners

While math and reading screeners are well established and their effectiveness supported by years of research, written expression screeners are not used as frequently and their technical adequacy is less established.

“We have a technical adequacy and practical utility problem,” Keller-Margulis said. “We are not sure how much these two issues are related.”

The current focus of Keller-Margulis’ work is to understand the effectiveness of existing measures. To achieve this goal, she first tested the effectiveness of current testing screeners. Her research has shown that conventional procedures for screening students – the presentation of a prompt, one minute to think and three minutes to write – does not yield scores with adequate reliability (Keller-Margulis, Mercer and Thomas, 2016). In addition, validity is best for the scoring indicators that tend to be the most time consuming (e.g. Keller-Margulis,



Professor Jorge E. Gonzalez (left) and Associate Professor Milena A. Keller-Margulis of the School Psychology program

Payan, Jaspers and Brewton, 2016). Ultimately, current procedures do not result in scores that are useful and feasible for screening.

So, how can schools quickly and effectively score these exams? Keller-Margulis is looking at several different options to improve the technical adequacy of the measures and issues related to utility such as the speed and accuracy of scoring written expression screeners.

Environmental Factors

As Gonzalez and Keller-Margulis continue their research work, they do so with an important concept in mind: The idea that focusing on the student alone tells only part of the story. To develop better screeners, to develop new reading interventions, they must survey the student’s environment as a whole.

“Is it the learning tasks? Is it the instructors? Is it the home environment? Is it the learner?” Gonzalez said. “If you only look at one system, you fail to take into account aspects of the environment that, regardless of what you do, are going to impact the child.”

“In some ways, that makes our program unique or maybe distinguishes us,” Keller-Margulis said. “Any skill deficits that we’re trying to measure or remediate are a function of that mismatch between what the child knows and what the expectations are in the environment. That’s what we look to either measure or remediate.” 🌸

Translational **Health**

TAKING TEXANS

TOBACCO FREE

WHILE THE NUMBER OF TOBACCO USERS IN THE UNITED States has declined (16.8 percent in 2014 versus 25.5 percent in 1990), one population continues to smoke at an alarming rate: Those with behavioral healthcare needs.

According to the Centers for Disease Control, 40.6 percent of adults with serious psychological distress smoked cigarettes in 2015. When compared to the number of smokers with no diagnosed psychological distress (14 percent), it's easy to see why adults with mental health diagnoses die an average of 25 years earlier and are 2.6 times more likely to have cancer than those without mental illness.

A partnership between the University of Houston, Rice University and Integral Care of Travis County, *Taking Texas Tobacco Free* delivers a multi-pronged Tobacco-Free Workplace Program to selected Texas Local Mental Health Authorities (LMHAs) to help consumers quit tobacco and create a safer, healthier environment for everyone. Supported by a grant from the Cancer Prevention & Research Institute of Texas (CPRIT), the program targeted 18 LMHAs, home to more than 250 mental health clinics, between 2013 and 2016.

Associate Professor Lorraine Reitzel served as project co-director.

Everyone who uses tobacco should quit, but why is it especially important to help those suffering from mental illness quit smoking?

Tobacco use is not routinely addressed within behavioral health settings, despite the consumers' desires to quit. This is a missed opportunity to address the tobacco-related disparities suffered by individuals with behavioral health needs. Increased smoking cessation rates are critically important to health promotion and cancer prevention in Texas, especially in rural areas



Associate Professor and current PHLS Department Chair Lorraine R. Reitzel directs UH's Social Determinants and Health Disparities Lab. For more information, visit www.lorrainereitzel.com. For more information about Taking Texas Tobacco Free, visit www.takingtexastobaccofree.com.

where tobacco use rates are high. And quitting smoking offers other benefits to people with behavioral health needs. It is associated with reduced depression, anxiety, stress and improved mood and quality of life compared with continuing to smoke.

How did you go about implementing this program?

We actively assisted agencies to implement the four program components, which were: 1) one hundred percent tobacco-free workplace policy implementation, enforcement and monitoring; 2) education to all staff and specialized training to all clinicians; 3) the integration of evidence-based screenings for tobacco use and the treatment of tobacco users as a routine clinical practice; and 4) community outreach about the benefits of tobacco-free living. We also created materials to assist with training and patient education in English and Spanish.

We worked closely with various constituents to identify center-specific strengths and implementation barriers to provide the most effective technical support possible. We attempted to reach every employee and clinician with our education and training programs. We met with our centers throughout the project to continually assess progress. We collected pre- and post-implementation quantitative and qualitative data and provided results from these assessments back to the centers for their information and use.

What type of feedback did you get from clinic staff?

The enthusiasm of some of the LMHAs was so great that they came up with spontaneous and creative initiatives and practices to continue to promote the health

and wellness of their employees and consumers through additional tobacco-free programming and policies. Most notably, Spindletop Center in Beaumont adopted a tobacco-free no hire policy. Metrocare in Dallas and Integral Care in Austin are following suit.

What is the next phase of this project?

In 2016, UH received funding from CPRIT to expand the program into two additional LMHAs. Along with Integral Care, we are working on a step-by-step implementation guide and several other resources that will enable our participants – as well as others accessing these resources – to implement *Taking Texas Tobacco Free* in their settings. We are working closely with these additional LMHAs to provide education, technical assistance, policy guidance and resources for program implementation. We recently received funding to implement the program within substance abuse treatment facilities across Texas, and we hope to eventually expand nationally.

It takes money to make these changes happen. Texas, through CPRIT funding, has enabled us to make great progress in addressing tobacco use among individuals with behavioral health needs, and we are lucky to have that funding available to us in the state. We are always seeking to improve what can be done by working *with* agencies, not doing *to* agencies. We want our stakeholders to be an active part of the process to enhance sustainability. Our community partners educate us as well as the reverse, and we are continually open to modifying our approach based on their feedback. 🐾

Psychological, Health & Learning Sciences

RESEARCH AND SCHOLARSHIP AT A GLANCE



\$2.0 Million
Federal Research
Expenditures

In 2016, PHLS federal research expenditures reached \$1,976,116. **That's a 408% increase since 2013.**



\$2.3 Million
Total Research Expenditures
Up 309% from 2013 to 2016

A sampling of organizations that have funded PHLS research:

American Cancer Society
Cancer Prevention Research Institute of Texas
Health Resources & Services Administration

Institute of Education Sciences
National Institute of Health
UnitedHealth Foundation



PHLS scholarship was
cited more than 2,700
times in 2016.



53%
since 2013

Quantitative **Methods**

DEVELOPING QUANTITATIVE METHODS THAT ADVANCE SCIENTIFIC KNOWLEDGE

IN 2016, UH'S EDUCATIONAL PSYCHOLOGY AND INDIVIDUAL Differences program was renamed the Measurement, Quantitative Methods & Learning Sciences (MQM-LS) program. Simply put, the old name didn't properly capture the totality of the classroom and research work the program's faculty and students do every day.

The MQM-LS program's mission is to advance scientific knowledge and help address significant societal problems and the needs of diverse learners through the development and application of learning theory and state-of-the-art quantitative research methods. The program also trains students to design and conduct research using appropriate quantitative research methods and apply those methods to investigating the educational, social and psychological problems facing our nation's schools, communities and citizens.

"It's important that your research is theory driven," said MQM-LS program director Weihua Fan. "You have your theory. You have your hypothesis. Based on that you design your research and conduct data analyses. The two parts are interrelated."

The MQM-LS program is dedicated to pushing quantitative methods research forward. To achieve that goal, the program has sought to hire highly qualified and energetic professors. Here are two of the program's newest faculty members.



Yu Liu

Assistant Professor Yu Liu joined the MQM-LS program during the fall 2016 semester. Liu completed her Ph.D. in Quantitative Psychology at Arizona State University under the tutelage of Dr. Stephen G. West. While attending ASU, she worked as a data analyst on two grant-funded projects: A study charting growth and change in Mexican-origin youths and their parents and an evaluation of the longitudinal influences of HIV prevention programs on at-risk, alcohol-involved, young African American women. Liu's methodological research interests lie in the modeling of longitudinal data using multiple frameworks, including multilevel (mixed) modeling, growth curve modeling and dynamical systems. Her primary focus is on statistical modeling and measurement issues in the study of intraindividual change and interpersonal processes influencing intraindividual change.



Hanjoe Kim

In Fall 2017, the MQM-LS program welcomed its newest faculty member, Hanjoe Kim. Kim earned his Ph.D. in Quantitative Psychology from Arizona State University. While there, he worked on a number of NIH and IES funded projects examining the efficacy and effectiveness of physical and mental health preventive intervention trials. Kim's quantitative research focuses on multivariate statistical models – including survival analysis, Structural Equation Modeling, growth mixture models, multilevel data analysis, longitudinal data analysis and propensity score analysis – and measurement issues such as measurement invariance. 🐾



Quantitative **Methods**

USING BIOLOGICAL MARKERS TO INVESTIGATE HEALTH DISPARITIES

AFRICAN AMERICANS ARE EXPOSED TO STRESSORS THROUGH experiences of racism, discrimination, violence, crime, unemployment, financial strain, and built environment challenges linked to impoverished neighborhoods. This wear-and-tear on the body's stress system can lead to increased vulnerability to substance use and infectious and chronic diseases. Substance abuse – compounded by a compromised stress system – places the community at risk for negative outcomes associated with violence (e.g., homicide, suicide, domestic violence, etc.) and diseases (e.g., prostate cancer, chronic liver disease, hypertension, gastritis, pancreatitis, sexually transmitted infections, meningitis and diabetes). UH Counseling Psychology Professor and College of Education's Associate Dean for Research Ezemenari M. Obasi has dedicated his research to investigating the biological, psychological, social, and cultural determinants of health. On the following pages, Obasi outlines how his team is working to improve community health, inside and outside the laboratory.



Prevention Science

One way to eliminate health disparities is to prevent the disease from occurring in the first place.

Prevention science recognizes that there are a lot of factors (e.g., biological, behavioral, built environment, societal, sociocultural, health-care system, etc.) that influence systematic differences in prevalence rates and outcomes of chronic diseases that affect vulnerable and marginalized communities. We are engaged in innovative research that can identify new targets of prevention that can reduce the overall development of chronic diseases. Moreover, we are also leveraging our data to identify new treatment targets that can be used to develop culturally-informed interventions that address physical and mental health challenges while increasing overall length and quality of life.



Biological Mechanisms

Innovative science can identify novel targets for prevention and treatment.

Research suggests that chronic exposure to stress can lead to a dysregulated human stress response across time. Furthermore, a dysregulated Hypothalamic-Pituitary-Adrenal (HPA) axis has been linked to drug dependence, withdrawal, and relapse. We have designed a cutting-edge laboratory and experimental designs that can investigate genes, hormones, immunology biomarkers, and physiological responses to acute and chronic stressors and substance use. The intent is to uncover novel mechanisms that identify targets for the prevention and treatment of chronic diseases disproportionately affecting vulnerable and marginalized communities.



Community Engagement

Equitable relationships with the community make a collective impact.

Dr. Obasi, Director of the Hwemudua Addictions and Health Disparities Laboratory (HAHDL) is committed to taking our cutting-edge science and translating it to be of use to the communities that we serve. We participate in health fairs where we provide free health screenings to our community members. We provide educational workshops to our local stakeholders and community-based organizations. We create educational materials that are disseminated in workshops, community events, on the internet and through social media. We listen to what the community identifies as being its primary challenges and design research projects that can be used to create sustainable solutions through equitable partnerships. For more information, visit www.ezemenariobasi.com. For more information about Project TOUCH, visit <http://touch.healthuh.com>. 🐾

LEADING OUR PROFESSION TO A PROMISING FUTURE



CACREP Master's Program

Committed to providing the best educational and research opportunities for the community and its students, PHL's Master of Education in Counseling program is seeking accreditation by the Council for Accreditation of Counseling & Related Educational Programs. With this goal in mind, the program will hire three additional faculty members with doctoral degrees in Counselor Education (Dr. Rachael Whitaker joined our faculty in Fall 2017). Once the new hires are on-board, program faculty will study and tweak the curriculum to match CACREP's standards, conduct a self-study and finally apply for accreditation.

Health Psychology Ph.D. Program

Plans for a proposed Health Psychology Ph.D. program have been submitted to the university. Once approved, recruitment could begin in fall 2019 with the first cohort starting in fall 2020. The program's mission would be to advance science and evidence-based applications that increase health equity among diverse populations through meaningful research; produce a cadre of scientifically-minded, culturally-informed scholars who are committed to the pursuit of health equity through rigorous training and mentorship; and contribute to the health of the community and the future of the discipline through service and leadership.

New HDFS Certifications

The Human Development & Family Studies program is developing two additional tracks to help students better serve their communities. Starting in 2018, the Certified Family Life Educator (CFLE) track will prepare graduates who meet requirements to take the family life educator national certification exam. As a family life educator, graduates won't be confined to a specific job but will have the opportunity to work in a variety of fields including education, research/scholarship, community education and non-profit organizations. The Early Childhood Interventionist (ECI) track was designed in partnership with the Texas Health and Human Services Commission (HHSC). Early Childhood Intervention (ECI) professionals work with infants up to the age of three years old who have developmental delays, disabilities or are referred for services for other reasons.

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