

Undergraduate Research Symposium May 18, 2012 Mary Gates Hall

Online Proceedings

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MCNAIR SESSION - PROMOTING HEALTH, EDUCATION AND EMPOWERMENT IN A DIVERSE AND CHANGING WORLD

Session Moderator: Adrian Sinkler, Political Science

Mary Gates Hall 295

3:30 PM to 5:00 PM

* Note: Titles in order of presentation.

Health Disparities through Data Visualizations

Elizabeth Marie (Elizabeth) Emau, Junior, Biology (Molecular, Cellular & Developmental)

Howard Hughes Scholar, McNair Scholar

Mentor: Sara Curran, International Studies

Mentor: Jessica Beyer, Jackson School of International Studies

Data visualizations are representations of data that reveal multivariate relationships of local and global health structures, where other visual tools have limited analytical capabilities and/or require expert research practices. I am working to start a digital initiative to create such an emerging tool to be used by social scientists, students and journalists through the Knowledge Network of World Events (KNOW) interactive website. This project involves the development of a data visualization that facilitates a deeper understanding of health disparities of the epidemic crisis of malaria in Uganda while providing insight into overlooked distribution patterns and treatments that will be summarized in a Global Fund proposal. Using international data bases such as World Health Organization (WHO), International Monetary Fund (IMF), and country reports, I identify various visual tools, social determinant factors, and news stories to be compiled into an annotated library that is structured into a framework on the KNOW project website. The expected result is a means for Jackson School educators to structure a curriculum around contextualizing news stories, for students with little knowledge in advanced research methods and finding diverse sources, and for journalists reporting global health issues.

Healthcare Accessibility in the Twin Cities Metropolitan Area Hmong Community

Chia Lee, Junior, Geography, GIS, University of St. Thomas McNair Scholar

Mentor: P. Lorah, Geography, University of St. Thomas

This research discusses healthcare accessibility issues among

the Hmong ethnic group in the Twin Cities metropolitan area located in Minnesota. Research was based on the geographical access to healthcare in the Hmong community. Through the Geographical Information System (GIS), I predict that the Twin Cities' Hmong community lacks access to healthcare. The Hmong community, when mapped, was concentrated in two particular locations in Minneapolis and Saint Paul. The use of GIS helped to project statistical analysis of different aspects concerning healthcare such as healthcare facilities, healthy and affordable food, and public transportation. These were analyzed by mapping their distances from the Hmong community. Statistical analysis was examined by scatter plots were the correlation between the Hmong community and where healthcare, food sources, and public transportation was located were weak. Statistical analysis showed that the Hmong community of the Twin Cities metropolitan area is centrally located. Given the study area at the scaled researched (1km), the Hmong were not especially isolated from healthcare, food, and public transportation. This showed that this community is isolated but isolation is not a major factor shaping healthcare outcomes. Since isolation would not be a major factor of access to healthcare other factors may contribute to the limitations in this community such as cultural and language barriers and health literacy. More studies about the Hmong would be beneficial in order to examine the gap in health and healthcare in the community.

Mental Health Disparities among Latino/as in Inpatient Care

Montserrat Garcia, Senior, Psychology, Chicano/a Studies, University of California, Davis

McNair Scholar

Mentor: Nolan Zane, Psychology, University of California, Davis

Mental health disparities for ethnic minorities constitute a major challenge in the mental health field. Disparities among

ethnic minorities may occur due to the underutilization of mental health services, short-treatment stays, and/or inadequate treatment Latino/as may underutilize mental health services because they may tend to seek mental-health-help from general practitioners rather than from specialists. Higher dropout rates among Latino/as may be linked to acceptability and appropriateness of mental health services, and inadequate treatment for Latino/as may be due to language barriers and lack of cultural competence among care providers. Disparity in underutilization of treatment appears to be even more pronounced among Latino/as with mental disorders. For example, only 51.8% of Latino/a adults with a major depressive episode in the past year received treatment compared to 73.3% of similarly afflicted white adults. However, most of the evidence on mental health disparities among Latino/as is derived from studies examining outpatient services, and less is known about disparities in inpatient care. In this archival study we examine disparities among inpatients through a retrospective chart review of Latino/a patients who have received specialty mental health services through inpatient psychiatric treatment. Specifically I examine the proportion of Latino/a patients who have received inpatient care relative to the proportion who resided in a local area. Secondly, I will compare length of stay for Latino/a patients in inpatient care to that of other minority groups as well as whites. Third, I will determine if the outcomes of inpatient care of Latino/a patients are similar or different from the outcomes of other minority clients as well as white clients. Results from this study will have important implications for the delivery of mental health services for Latino/as.

Ann Prepare Lavni: A Study of the Multilingual Learning System in Haiti

L. Carolina (Carolina) Tavarez, Sophomore, Spanish with emphasis in Latin American & Hemispheric Studies and Education, University of California, Davis

McNair Scholar

Mentor: Linda Egan, Spanish & Portuguese, University of California, Davis

Historically, Haiti's education system has been underfunded, with little (8%) government support. This project is directed at Haiti's costly Foreign Language (FL) programs and the way these interact with the Haitian economy. The plan is to train FL teachers in Barbe Pagnol and equip them with the most up to date knowledge and tools, which will provide a free, higher FL education. Two teachers will be tested on their respective language, before and after completion of the course. Teachers will apply their new knowledge in the classroom, with 30 former students as test subjects. The lessons will be filmed. Afterwards teachers will watch the videos together, offering positive critiques of one another's performance. The goal of this qualitative pilot is to subsequently implement the program in Haiti. Developing the language abilities of the students now in school will improve the ef-

fectiveness of the work force later. Ideally, it will foster in students the commitment to improve communicative ability, cognitive development and cultural awareness, with the ultimate goal being job opportunities.

The Racial Disproportionality of Youth in Foster Care and Their High School Success

Susana Marie (Susana) Contreras Mendez, Senior, American Ethnic Studies, Sociology

McNair Scholar, Zesbaugh Scholar

Mentor: Frances Contreras, Education

With the changing demographics in Washington State and the large number of underrepresented youth in the foster care system it is vital to make sure these students graduate on time. These students face more challenges and barriers when it comes to education because of the racial disproportionality of underrepresented students in Washington State who attain a high school diploma. This research will look at the ten largest Latino serving school districts in Washington State to compare the on-time graduation, late graduation and non-returning dropout rates amongst high school students who are in the foster care system. It analyzes the categories used for dropping out in order to better understand the social differences high school students in foster care face, that cause the dropout rate for them to be higher when compared to their peers. It will also focus on the ways in which the school districts support or hinder foster care students and their families when it comes to students dropping out. The objective of this research is to look at the ten largest Latino serving populated school districts in Washington to investigate whether there is a disparity among the reasons given for dropping out, in comparison with their peers. I will look at literature reviews, governmental reports from the U.S. Department of Health and Human Services. The research goal is to better understand why high school students in foster care are dropped out at higher rates in some districts and not in others and how districts are dealing with their specific needs to get them to graduate on time.

Gender Rights and Unionization in the Maquiladora Sector

Anthony Clifton (Tony) Dias, Senior, Political Science

McNair Scholar

Mentor: Adrian Sinkler, Political Science

Does foreign direct investment lead to female empowerment, or does it lead to female exploitation? I address this question by analyzing how the maquiladora program, manufacturing operations based in Northern Mexico that employ large numbers of women, operate in free trade zones. I argue that the culture of patriarchy produces new forms of female exploitation in the workplace. Through an extensive review of available literature and news media, my findings indicate that despite increased wages and economic independence, along

with increased life satisfaction among women who are young, single and childless, those with families often find themselves facing a double burden of having to work and fulfill their traditional domestic responsibilities. Such women are often made to feel guilty for not spending enough time with their children and some endure physical and sexual intimidation both at work and at home. In addition, maquiladora work is dis-empowering for both childless women and mothers because of patriarchal relations in the workplace that lead to isolation and a lack of self-identity (conscious awareness of the self as having a unique identity). For example, women face forms of harassment, including questions regarding their sexual practices, pregnancy screening prior to employment, sexual objectification in the form of workplace beauty contests, sexual propositioning and unsafe working conditions. As a result, women are less likely to unionize and tend to accept work assignments and conditions men are less likely to accept.

Early Onset Criminal Offending: The Impacts of Childhood Risk Factors

Jennifer Fabian, Junior, Psychology A.B., Women and Gender Studies A.B., Sociology (minor), University of California, Davis

McNair Scholar

Mentor: Kevin Grimm, Psychology, University of California, Davis

Previous research indicates a strong link between early onset of delinquent behaviors and repeat offending in adulthood, supporting the need for earlier intervention and treatment of criminal offenders. The present study explores the link between childhood behavior problems and adolescent and young adult criminal offending to identify at risk populations. It is hypothesized that childhood mental health problems, poor academic performance, and poor home environment will lead to an earlier onset of criminal offending compared with the absence of these characteristics. Criminal offenses will be measured in terms of convictions, probation, court-ordered therapy, court-ordered institutionalization, and use of violence on others. The data will come from the National Longitudinal Survey of Youth – Children and Young Adults which interviews children and their mothers every other year concerning a variety of life experiences (N = 11,495; Race: 19.21% Hispanic, 27.73% Black, 53.06% non-Black, non-Hispanic; Gender: 51.07% Male, 48.93% Female; Age range [0,35.12]). Survival analysis will be employed to identify behaviors and experiences reported in childhood that predict the onset of later criminal offending. Survival analysis uses a beginning time (labeled $t = 0$), an event (independent variable) that occurs or does not occur after $t = 0$, and an outcome event (dependent variable) to determine how the presence of the earlier event affects the timing of the dependent event. Results of this study may provide ways to identify factors predictive of early criminal offending

and to identify high risk populations. More effective treatments can be developed by recognizing how these factors influence certain populations.