

**Demographics of Aging in the Americas:  
Health, Social, and Economic Dynamics of  
Hispanic and Latin American Aging**  
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Aging in the Americas  
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# Demographics of Aging in the Americas: Health, Social, and Economic Dynamics of Hispanic and Latin American Aging

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## Preface

Almost 35 million persons of Mexican descent live in the United States, more than one-quarter the number of all persons currently living in Mexico. An additional 19 million report other types of Hispanic ancestry. The US and Latin America also have strong economic connections and are intimately tied in a wide variety of other ways. In this context, understanding the issues of aging on one side of the border can help us better understand those on the other side, not to mention building knowledge about aging that is transnational.

The International Conference Series on Aging in the Americas brings together scholars who are pushing the field of aging research forward on both sides of the border. It fosters new research partnerships, reinvigorates existing partnerships, and exposes all involved to the state of the art in this area. The series is supported by a NIH/NIA conference grant and so the NIA-funded Resource Centers on Minority Aging Research (RCMAR) are pleased to be able to help disseminate the products of this conference to a broad audience interested in minority aging research. This document includes a summary of the conference along with abstracts of the presentations and posters. Many of these original works will appear later as chapters and articles in the professional literature, making this document an excellent preview of what is to come in the state of the art. I hope you find this work as thought provoking and intellectually stimulating as I have. Steven P. Wallace, PhD, Director, RCMAR National Coordinating Center

## Conference Highlights

This year's theme focused on aging in the Americas in the context of demographic change and the social, health, and economic dynamics of Hispanic aging and migration. The following summary describes the events at the seventh installment of the International Conference Series on Aging in the Americas.

A pre-conference workshop for users of the Mexican Health and Aging Study (MHAS) was held during the day on September 23, 2014. The workshop covered a summary of the MHAS, data files and documentation, and several presentations using MHAS data, focusing on the data manipulation needed to produce the results. The workshop had 30 registered participants. That same evening, the 2014 conference program, with just below 75 registered participants, commenced with a reception and dinner at the Hotel Boulderado. In his after-dinner speech, keynote speaker **Sergio Aguilar-Gaxiola** (UC Davis), covered a number of growing key issues in mental health in the Mexican-origin populations in both California and the greater United States. Dr. Aguilar-Gaxiola underscored the need to disentangle obstacles blocking access to care and examine how social determinants shape mental health in older adult Latinos.

Day two opened with a session on social determinants of health and health behavior of Hispanic older adults in the United States, moderated by **Kyriakos Markides** (UTMB Galveston). **Robert Hummer** (UT Austin) kicked off the first session of the day with a very thoughtful and well-organized overview of recent scholarship on Hispanic older adult health and longevity. Hummer highlighted several areas of future concern for scholarship including the relationship between the established paradox of Hispanic mortality and the non-paradoxical status of Hispanic functional health in later life. Additionally, Dr. Hummer underscored the growing undocumented population and complex racial and ethnic identity within the Hispanic population, making "simple" projections increasingly difficult for future researchers. Additional papers in this session examined important topics including Hispanic subgroup differences in social and socioeconomic determinants of health behaviors (**Rick Rogers and Liz Lawrence**, University of Colorado Boulder); the effects of social support trajectories on Mexican American mortality (**Terrence Hill**, The University of Arizona); gender, age, and socioeconomic determinants of BMI in old age across race and ethnicity in the US (**Anna Zajacova**, University of Wyoming).

Between the morning and afternoon paper sessions, conference participants attended a peer-reviewed, emerging scholar poster session, part of the CAA Mentoring Program. The aim of the CAA Mentoring Program is to facilitate one-on-one interaction and networking between emerging scholars and faculty mentors. The ultimate goal of the program is to provide the skills, knowledge and experience to prepare emerging scholars to succeed in their career paths in the behavioral and social sciences. To this end, the 2014 ICAA fostered the development of emerging scholars by sponsoring a peer-reviewed poster session on Wednesday, September 24 in addition to the invited speakers and keynote lectures. The Emerging Scholar Mentoring Program encouraged proposals from all interested graduate students and post-doctoral trainees and is dedicated to maximizing diversity within the Scholar network. The poster session organizer, Terrence Hill, reviewed all submissions to confirm topical relevance. Poster abstracts were submitted from around the U.S. and Mexico. This year, 20 posters were presented representing Gerontology, Sociology, Demography, Economics, Public Policy, Psychology, Social Work, Medicine, Public Health, Nursing, and Kinesiology & Nutrition.

The top three posters were selected by a juried panel to receive prizes. The judges included **Cesar Gonzalez** (Instituto Nacional de Geriatria), **Ryan Masters** (University of Colorado-Boulder), **Norma Padron** (New York Academy of Medicine), and **Timothy Reistetter** (The University of Texas Medical Branch at Galveston). Prizes included Amazon gift cards, including \$50.00 for 3rd place, \$100.00 for 2nd place, and \$150.00 for 1st place.

First Prize: **Carlos Diaz**, The University of Texas Medical Branch at Galveston, “Family Size and Old Age Well-Being: Effects of the Fertility Transition in Mexico.”

Second Prize: **Jacqueline Torres**, University of California, Los Angeles, “Gender, migration and late-life health: Conditional effects of spousal U.S. migration on the health of older Mexican women.”

Third Prize: **Joseph Saenz**, The University of Texas Medical Branch at Galveston, “Facets of Socioeconomic Position and Disability Onset and Progression”

The late morning paper session showcased four paper presentations from the Emerging Scholars poster session. These four outstanding submissions were selected by **Mary Haan** and **Eileen Crimmins** for oral presentation during the regular conference proceedings. (Please refer to the section “Emerging Scholars Program” for more information.) Two of the papers, by **Philip Cantu** (University of Texas at Austin) and **Lawrence Panas** (UTMB Galveston), contributed to scholarship on disability in later life. Using data from the National Health and Aging Trends Study (NHATS) and the H-EPESE, Cantu’s findings highlighted the importance of using objective measures of lower body functioning to better understand the mechanisms of disability in later life across different racial and ethnic groups. Using H-EPESE data, Panas draws attention to the role of time in the relationship between depression and disability among Latino older adults. Drawing from the Los Angeles Family and Neighborhood Study, **Daesung Choi** (University of Texas at San Antonio) examined the effects of legal status, neighborhood effects, and acculturation on the health of Latino adults. Choi found a weak relationship between legal status and health outcomes, attributing the effect to the “majority-minority” demographic composition of Los Angeles and the importance of studying health outcomes of immigrants in non-traditional destinations. Using data from the New Immigrant Survey (NIS), **Elisha Cohen** (Princeton University) examined how US immigration and welfare policy in conjunction with age at arrival shapes immigrant health of Latino older adults. Cohen’s findings underscore the direct and indirect effects of how policies that limit fiscal well-being influence the health of late-life Latino immigrants.

After lunch, the keynote speaker, **Judith Treas** (UC Irvine) presented a thought-provoking lecture that spotlighted an overlooked population, the late-life immigrant. In a time when most of their counterparts

are “aging in place,” late life immigrants are uprooting their lives and immigrating to the U.S., mainly to be with their adult children and grandchildren. Dr. Treas’ research draws on rich qualitative data and highlights intergenerational familial challenges faced by this vulnerable population. Four key “lessons” were presented. The first lesson emphasized the familial motivations of late-life immigration over the other attractions of American living such as old-age benefits, especially since many of these benefits such as social security do not apply to this group of immigrants. The second lesson, supported by the narratives of several interview participants, asserted that the relationship between adult child and parent is interdependent, *not* dependent. Indeed, there may be some economic dependency on adult children, but late life immigrants make plenty of domestic contributions such as being sources of trusted child care, housekeeping, cooking, nursing the sick, etc. Additionally, grandparents are expected to be the preserver of culture and responsibly for preserving and teaching cultural traditions to younger generations. The third lesson challenges commonly held assumptions that older immigrants are authoritarian figures in the household. Dr. Treas shared stories from several interviewees who traded subordination for support and deferred to their adult children, who had greater knowledge of US norms. The final lesson presented by Dr. Treas also challenged romanticized notions of happiness in multi-generational households, sharing stories of being bored, lonely, and having difficulty finding peers outside of the household because of language and transportation barriers. In the keynote conclusion, Dr. Treas emphasized the family as a critical social institution that directly shapes immigrant adaptation and wellbeing, including of course health.

The afternoon paper session, moderated by **Steven P. Wallace** (UCLA Fielding School of Public Health), contributed important scholarship on healthful aging in Mexico. Several of the papers examined different aspects of health, aging, and family in Mexico such as **Francisca Antman** (University of Colorado Boulder), who presented on the effects of migration and return migration of adult children on the health of aging parents. Antman focused on the complex relationship of migration and health in Mexican families and found evidence that suggests a greater probability of poorer parental health for those with migrant adult children than those with non-migrant adult children in Mexico. Along similar lines, **Jenjira Yahirun** (University of Hawaii – Manoa), using data from the Mexican Health and Aging Study (MHAS), examined how the socioeconomic resources of their adult children shape physical health of parents of migrants. Additional papers examined how familial social support shapes the trajectories of chronic illnesses and functional limitations (**Stipica Mudrazija**, University of Southern California) and cross-national comparisons of SES-health gradients between Mexican migrants in the US and Mexico using data from NHANES and ENSANUT (**Hiram Beltran-Sanchez**, University of Wisconsin Madison).

On Wednesday evening, ICAA hosted a mentoring session for emerging scholars comprised of both graduate students and postdoctoral fellows. The mentoring program, organized by William Vega and Stipica Mudrazija (USC) featured an awards ceremony, a dinner, and a “speed mentoring” session to facilitate feedback on the work presented at the poster session. The “speed mentoring” session included 15 faculty mentors: Jacqueline Angel (The University of Texas at Austin), Patricia Heyn (University of Colorado Boulder), Robert Hummer (The University of Texas at Austin), Mariana Lopez-Ortega (Instituto Nacional de Geriatria, Mexico), Kyriakos Markides (University of Texas Medical Branch), David Marquez (University of Illinois at Chicago), Ryan Masters (University of Colorado, Boulder), Susan Parker (CIDE, Mexico), Fernando Riosmena (University of Colorado, Boulder), Sunshine Rote (University of Louisville), Judith Treas (University of California, Irvine), William Vega (University of Southern California), Robert Wallace (University of Iowa), Steven Wallace (University of California, Los Angeles), Rebeca Wong (University of Texas Medical Branch). 23 emerging scholars including graduate students and postdoctoral fellows also participated. Each emerging scholar met with two mentors for twenty minutes each and discussed current and future research plans as well as advice on the job market and tactics to succeed in their careers in the behavioral and social sciences.

Following this session, mentees were asked to evaluate the program and 14 individuals participated. An overwhelming majority (93%) rated the experience as excellent or very good. The same proportion of mentees said they would recommend this speed mentoring activity to a friend or colleague. Open-ended qualitative remarks indicate mentors and mentees had an overall positive experience. One mentee said she/he expected to “discuss career trajectory, research ideas, and research funding with senior scholars” while another mentee expected to “get advice on post doc and career options.” A few note that the format was excellent and should be repeated in future conferences. Some suggestions for improvements for the next ICAA include a quieter location, making the sessions last longer, and inviting mentors and mentees to get in touch prior to the meeting.

On Thursday, September 25, the final day of the conference, the final paper session focused on Hispanic health and well-being beyond the US, focusing on Mexico, Brazil, and Colombia. **Susan Parker** (CIDE) examined the *Seguro Popular* national insurance program shaped access to health services and impacted health behaviors between urban and rural areas of Mexico. Using data from the MHAS, Parker and colleagues found the greatest impacts of Seguro Popular on health behaviors such as doctor visits were seen in rural areas, with more modest effects in urban areas. **Cassio Turra** (Cedeplar, UFMG) highlighted effects of structural changes in the composition of education on mortality, in Brazil. Brazil experienced a sharp increase in completion of secondary education among women between 1960 and 2010. This shift in the structure of education accounted for more than one third of life expectancy gains for Brazilian women between 1960 and 2010. **Rafael Sampert-Ternent** (Universidad Javeriana, Bogota, Colombia – UTMB Galveston) used MHAS data and the SABE Bogota Study to examine cross-national differences in cognitive functioning, stratified by gender, in urban areas of Mexico and Colombia. Using biomarker data from MHAS, **Soham Al-Snih** (UTMB Galveston) provided a much-needed description of prevalence of pre-diabetes and undiagnosed diabetes in Mexican adults. Analysis of HbA1c biomarker data revealed a higher prevalence of both pre-diabetes and undiagnosed diabetes in the 50-65 age group than the over 65 age group, underscoring the pressing need for health interventions to address these major health concerns.

**Noreen Goldman** (Princeton University), the final keynote speaker, presented arguments that suggest both an erosion and endurance of the Latino mortality advantage. Dr. Goldman pointed to the high prevalence of obesity, diabetes, and disability as evidence of a likely decline in the Latino mortality advantage in the future. Moreover, Dr. Goldman hypothesized that immediate health declines experienced by Latino elders are unlikely to be due to acculturation *per se*, but to other stressors related to structural disadvantage faced by both foreign- and U.S.-born Latinos in the United States. For instance, exposure to stressors such as dangerous border crossings and anti-immigrant sentiments are associated with eventual biomarker dysregulation. In support of the endurance of the Latino mortality advantage, Dr. Goldman offered evidence from recent research that finds a continued mortality advantage between Latino and non-Latino whites, differences that can be mainly attributed to lower smoking prevalence among Hispanics. Despite these advantages, and because of the challenges posed above, Dr. Goldman hypothesized that the Latino mortality advantage is more likely to erode in the future than endure in its present form.

### **Consensus Building and New Directions**

Participants convened over lunch at the end of the conference to identify major priorities that have the potential to inform future research and extramural funding decisions related to aging in the Americas. Dr. Jacqueline Angel facilitated a 60-minute round-robin discussion with 35 invited speakers and emerging scholars. Two rapporteurs took notes of ideas discussed and the lead rapporteur organized the discussion outcomes around five key themes with the input of Dr. Fernando Riosmena.

*Given expansion of health care, particularly in Mexico, examine how low-income populations receive health information and interact with health care systems.*

Moreover, while access to health and health resources remains a key area for research, this does not mean resources are being utilized. Participants expressed strong interest in moving beyond studying access to resources, towards the mobilization of resources such as health insurance.

*Diversity in the demographic and sociohistorical contexts of migration.*

Growing population of undocumented immigrants place pressure on scholars to address this unique population, especially as they age and become increasingly vulnerable to the risks and barriers associated with later life and being undocumented. Future challenges for scholars include how to capture undocumented individuals in research. Additionally, the changing sociohistorical contexts of migration from the sending and receiving countries have shaped the how immigrants have incorporated, or lack thereof, into the host society.

*Better understanding of the family, socioeconomic, and health care use trajectories of the elderly during (early) adulthood.*

Participants noted that the study of (un)healthy aging necessitates the understanding of how (the accumulation of) experiences earlier in life (i.e., before baseline in longitudinal studies of aging) will be of relevance to understand and continue explaining socioeconomic and race/ethnic disparities in health in late life and the aging process more broadly. While some of this information cannot be captured retrospectively –which calls for research designs that span a larger part of the life course– some can. For instance, several participants noted the complexities of family formation and, sometimes, re-formation and the need to examine intergenerational and multidimensional impacts of family. On this regards, what are the emotional impacts on families, particularly aging family members? What are consequences of family separation in Mexico and the US? Some participants called for a “need to do more with familism” and whether it changes with processes of adaptation and acculturation.

*Better transdisciplinary understanding of old-age morbidity and mortality in the Americas.* Attendees expressed strong interest in incorporating more multidisciplinary perspectives and multinational comparisons in understanding morbidity and mortality. Greater utilization of perspectives from disciplines such as psychology, sociology, and nutrition are needed to better understand how people age in later life. For instance, how do sociological perspectives reveal different mechanisms in how older adults cope with functional limitations? How can nutrition sciences shed light on the connections between diet and Hispanic aging? Moreover, several attendees stressed the importance of international comparisons to capture broader and more diverse understandings of morbidity and mortality.

*Continued examination of the mechanisms of the Hispanic mortality advantage and identification of signs of its deterioration, with special attention to inflammation*

As suggested by the presentations of Professors Hummer and Goldman, there are signs that the Hispanic Health Paradox could begin eroding in the near future. Continued monitoring and understanding of the forces shaping Hispanic health will be paramount to continue understanding Hispanic health.

## Presenter Abstracts

### Invited speakers

#### ***Hispanic Older Adult Health and Longevity in the United States: Current Patterns and Concerns for the Future***

*Robert Hummer*

The U.S. Census Bureau projects that the aged 65+ Hispanic population will quintuple between 2012 and 2050, growing from 3.1 million to 15.4 million. Thus, Hispanics will play an increasingly prominent role in the overall older adult health profile of U.S. society as the 21st Century progresses. Drawing on a series of recent papers on the topic, this presentation first shows that current longevity patterns for aged 65+ Hispanics relative to whites are paradoxically favorable given the low socioeconomic status of the Hispanic population. Low mortality and high life expectancy are particularly striking for foreign-born Hispanics, but are also apparent for U.S.-born Hispanics. I also present simple models that illustrate the powerful impacts that cigarette smoking and socioeconomic status have on understanding the currently paradoxical patterns of older-aged Hispanic adult mortality. Second, though, I show that current patterns of old age functioning and disability for Hispanics are unfavorable compared to whites. Thus, the Hispanic paradox in older adult mortality is not accompanied by a paradox in functional health. The presentation concludes by arguing that there are more troubling signs for Hispanic health and longevity patterns looming ahead. These include the unresolved legal status of over 8 million unauthorized Hispanic immigrants, continued low levels of Hispanic insurance coverage even after healthcare reform, some unfavorable trends in Hispanic health behavior, and continued very substantial Hispanic socioeconomic disadvantages relative to whites. Policymakers will need to deal with all four of these potentially problematic health issues in a timely and humane fashion. Not doing so could have detrimental consequences for the future health and longevity patterns of the Hispanic population and, by extension, the United States as a whole.

#### ***Social Support Trajectories and the Mortality Risk of Older Mexican American Women and Men***

*Terrence Hill*

Although numerous studies have shown that social support tends to favor longevity, very little research has been devoted to linking trajectories of social support and mortality risk. Because the bulk of previous work has focused on predominantly non-Hispanic white and black populations, more research is needed to explore processes related to social support and longevity in Hispanic populations. Employing seven waves of data collected from the original cohort of the Hispanic Established Populations for the Epidemiologic Study of the Elderly (H-EPESE), we used growth mixture modeling (GMM) to estimate latent classes of social support trajectories. We then used the Cox proportional hazard regression model to estimate the relative risk of all-cause mortality as a function of the social support trajectories. Our GMM results revealed three social support trajectories in the data (consistently high, consistently moderate, and consistently low). Our Cox regression results showed that older Mexican American men who were assigned to the low social support trajectory exhibited a higher mortality risk than their counterparts who were assigned to the high social support trajectory. The social support trajectories were unrelated to the mortality risk of women. A statistically significant interaction term (social support\*gender) confirmed that social support was more strongly associated with the longevity of men than women. Our results extend previous work by identifying multiple latent social support trajectories and by documenting gender variations in the link between social support and mortality risk in the older Mexican American population.

***BMI Trajectories among Hispanic and Non-Hispanic Older Americans and their Social and Health-Behavioral Determinants: Health and Retirement Study 1992-2010.***

*Anna Zajacova and Anna Dahl Aslan*

Body weight trajectories represent a key dimension of the health profile of older populations. While the Hispanic vs. non-Hispanic disparities in health and mortality are fairly well described, relatively little is known about the Body Mass Index (BMI) changes over time. This question is particularly important in the older population because weight changes in older age groups are closely tied to health outcomes and may contribute to health disparities across major race/ethnic groups.

**Objective**

The objective of this project is to determine typical BMI trajectories of Hispanic and non-Hispanic older adults and to analyze key social and health-behavioral determinants of the trajectories in these major population groups.

**Method**

We use data from the Health and Retirement Study 1992-2010, a nationally representative panel survey of older Americans age 51-61 at baseline, with bi-annual interviews that include self-reported weight information used to calculate BMI at up to 10 waves. We estimate gender-stratified SEM-based growth models of BMI and investigate how the trajectory of Hispanic older adults differs from trajectories in other groups.

**Preliminary results**

Among men (age 51-61 at baseline), Hispanics have BMI trajectories similar to those of non-Hispanic whites. Among women, the picture is different: both the intercepts and slopes of the trajectories vary significantly between race/ethnic groups, with Hispanic women having significantly higher BMI levels (higher intercept) but smaller gains (smaller slope) than non-Hispanic white women. These differences were fully accounted for by the differences between the two groups in socio-economic status and health behaviors like smoking. These early results suggest that social disparities play a major role in race/ethnic differences in obesity at older ages among women.

***Health Behaviors among Hispanics in the United States***

*Rick Rogers and Elizabeth Lawrence*

It is important to study health behaviors of U.S. Hispanics because the Hispanic population is growing and is contributing a greater proportion of the total U.S. population, and because these health behaviors are undergoing remarkable changes. We examine trends in major health behaviors—including cigarette smoking, alcohol consumption, obesity, and exercise—among Hispanics in the United States. We test the healthy immigrant effect and the Hispanic Health Paradox with 1999 through the 2013 Integrated Health Interview Survey (IHIS). Strengths of the IHIS are that it is a large nationally representative dataset that includes detailed information on health behaviors for a variety of race/ethnic groups and Hispanic subpopulations, including Mexican Americans, Cubans, Puerto Ricans, and Dominicans. Health behaviors vary markedly by race/ethnicity, nativity, sex, and age, and differences generally remain strong after controlling for socioeconomic status, social relations, and regional and temporal differences. We find some evidence of the healthy immigrant effect, and highlight diversity within Hispanic subpopulations. As Hispanics become a larger proportion of the U.S. population, their health behaviors will increase in prominence. Furthermore, patterns across age and time suggest new, important, and emerging trends that will ultimately alter the Hispanic Health Paradox.

**Emerging Scholars Panel**

***Health differentials of older Hispanic immigrants by age at arrival***

*Elisha Cohen and Marta Tienda*

Increasing numbers of Hispanic immigrants are arriving to the United States at ages 50 and above. Current immigration policy gives preference to family reunification and sets a low financial threshold—125% of absolute poverty thresholds—to sponsor relatives. Welfare and immigration reforms

implemented in the mid 1990s attempted to mitigate fiscal impacts of immigration by requiring sponsors to sign a legally enforceable affidavit attesting to their financial responsibility for the sponsored relative (IIRIRA) and imposing a 5-year moratorium on access to Medicaid (PROWRA). There is little evidence evaluating healthcare needs and service utilization of foreign-born seniors. In light of rising health care needs of the aging US population, it is important to understand both the health status at arrival of immigrant seniors as well as changes in health status and care needs as these immigrants age in situ. Using the 2003 New Immigrant Survey (NIS) we examine variations in self-reported health and other health indicators of new immigrants by age at arrival and address whether the immigrant advantage obtains for late-age immigrants. Our focus on Latin American immigrants will be informed by comparisons with late-age arrivals from other regions and a sample of native-born Hispanics using the 2003 National Health Interview Survey (NHIS). Finally, we will use the recently released NIS follow-up survey conducted from 2007-2009 to analyze changes in health status and health care utilization as immigrants legally admitted in 2003 age into eligibility for public health care benefits. Older immigrants often experience worse economic outcomes than native-born because of more limited access to means tested public programs since the 1996 immigration and welfare reforms. Not only do late-age immigrants have fewer potential working years to earn access to social security benefits and Medicare, but depending on their home country work histories, likely have limited retirement savings. Because health and economic well-being are so closely linked, it is important to study whether this disadvantage of older immigrants persists to health outcomes as well. This study will provide useful information for evaluating the fiscal consequences of current immigration policy.

### ***Lower Body Limitations and Measurement in Elderly U.S. Populations***

*Phillip Cantu and Ronald Angel*

Using data from the National Health Aging Trends Survey (NHATS) and the Hispanic Established Populations for the Epidemiologic Study of the Elderly (HEPESE), we will examine different physical, social, and psychological mechanisms that are related to the way that elderly define limitations. Differential rates of self-reported disability between races may be partially driven by the ways in which different racial groups understand and define disability. Using objective measurements of functioning (POMA's), we compare how different racial groups self-report their abilities to carry out activities of daily living (ADL's). Specifically, we study concordance (agreement between multiple measures) of measured ability to walk across a room with self reports of ability to walk across a room. Prevalence of both self-reported and objectively measured ability to walk across a room varies by race and age. Preliminary results show that while rates of concordance dependent on failing the observed test are similar across races, the consequences of concordance vary by overall prevalence rates per race i.e. while the same percentage of blacks and whites experience disability discordance this results in a much larger population for blacks because of their higher rates of POMA disability in the first place. We will extend previous research on concordance of disability measurements for Mexicans to see if patterns hold across different races. Results from a multistate life table approach to burden of disability over time show that Mexicans experience longer periods of disability, measured by POMA, ADL, or both, and could possibly experience different disability trajectories compared to other ethnic groups.

### ***How Do Legal Status Moderate the Relationships Among Acculturation, Neighborhood Characteristics, and Health of Hispanic Adults?***

*Daesung Choi and Aggie J. Noah*

Objectives. Individuals' health and health behaviors in adulthood and mid-life has important implications for their health when reaching older ages and undergoing healthy aging within the life course framework. Implications of health in adulthood are not only lasting but also cumulative; thus, investigating complex factors affecting Hispanic adult health is imperative for understanding the dynamics of Hispanic aging in the United States. In this study, we investigate the moderating role of legal status on the relationships among individual- and contextual factors and health.

**Methods.** Using the Los Angeles Family and Neighborhood Survey, our sample is restricted to Non-Hispanic whites Latino adults aged 20 and older (n=2,602). We investigate the impact of individuals' acculturation and neighborhood characteristics on three health outcomes (self-rated health, smoking and drinking behaviors) using logistic regression models. Acculturation is measured with length of residence in the United States (documented versus undocumented) and neighborhood collective efficacy is constructed using seven survey items about individuals' perception of neighborhood cohesion and trust. In addition, we investigate how Hispanic immigrants' legal status moderates these relationships among acculturation, neighborhood characteristics and health.

**Findings.** Our preliminary findings indicate foreign-born Hispanics are healthier compared to non-Hispanic whites despite having lower socioeconomic status, consistent with the Hispanic epidemiological paradox. We then stratify foreign-born Hispanics by their legal status, but there are little differences in health advantages in all outcomes by Hispanics' legal status. In the next model, we further divide foreign-born Hispanics by the length of residence in the United States (less than 15 years versus 15 years and longer). Results show that among undocumented Hispanics, those who have lived longer than 15 years show unfavorable drinking status compared to non-Hispanic whites. In addition, documented Hispanics who have lived less than 15 years do not have favorable self-reported health when compared to non-Hispanic whites. We do not find any significant interaction effects between collective efficacy and Hispanics' legal status.

**Conclusion.** Overall finding suggests a weak effect of legal status on Hispanics' health outcomes but strong effect of nativity. In addition, our findings suggest little interactive effect between legal status and neighborhood collective efficacy. The effects of legal status may be minimal because the Los Angeles County is a minority-majority county where Hispanics are the ethnic majority. This may indicate that there are established networks and resources that undocumented foreign-born Hispanics can access regardless of their legal status compared to other places where Hispanic population is small. Future research should investigate how legal status is associated with Hispanics' health outcomes in other non-minority-majority places including new destination places. These findings suggest that Hispanic immigrants' legal status may only matter in specific contexts of reception (e.g., new destinations).

### ***An assessment of the temporal relationship between depression and disability onset in an older Hispanic Origin population***

*Lawrence J. Panas*

The association of depression and disability among older adults has long been of interest to researchers. Studies investigating the relationship between temporal associations of disability and depression have found stronger relationships of disability leading to depressive symptoms than vice versa. Given the rapid rise in the proportion of older adults of Hispanic origin, it is important to understand the disablement process and related conditions like depressive symptoms. Many studies that attempt to understand temporality look only across two time points of varying lengths for their analysis. The limitation of this approach is that it assumes that depressive symptoms are fixed from one period to the next and that it will provide a meaningful relationship. Since many studies ask about depressive symptoms in a way that confers a short-term effect, the association between disability and depressive symptoms between two waves may not be meaningful. Previous research from the Hispanic Established Populations for the Epidemiologic Studies of the Elderly (EPESE) showed that there was a correlational relationship between depressive symptoms and disability but did not explore the temporal relationship between these elements among Hispanic older adults. This study is the next step in evaluating the temporal relationship between depression and the onset of disability across a longitudinal study of older Mexican Americans. This study will use the Hispanic EPESE, which tracks across 8 waves from 1993-1994 to 2011-2012, to model the relationship between non-disabled and non-depressive Hispanics at Wave 1 across multiple waves. A variation of simultaneous equation modeling will be utilized to address lag effects of depressive symptoms and physical disability and their covariates over time (controlling for known fixed and variable covariates). The findings from this study will be used to inform clinical and

community interventions through the development of recommendations based on outcomes of this research.

## **Day Two Keynote Address**

### ***What Older Immigrants Teach Us about Later Life***

*Judith Treas*

Older immigrants, especially older newcomers, are little known outside their families and ethnic communities. Qualitative interviews tell stories that are often at odds with stereotypes and myths about older adults in immigrant families. Whatever the attractions of life in the US, older foreign-born persons immigrate and visit to be with their children who have settled in the US. Although they may seem like dependents, these older adults make major contributions to their families. They are not family authority figures, however, and the warm embrace of immigrant families is no guarantee against loneliness, boredom, and isolation in later life.

### ***SES Gradients among Mexicans in the U.S. and in Mexico***

*Hiram Beltrán-Sánchez*

It is well known that differences in health by socioeconomic status (a.k.a. SES gradients) among Non Hispanic Whites in the US are steep and, according to some findings, getting steeper over time. It is less well known that SES gradients among Mexican migrants to the US stand in sharp contrast as they are, by and large, quite shallow. There are a number of alternative explanations for these observed differences including heavy immigrant selection (particularly among those with low SES), selective return migration (among low-SES individuals in particular), or weak SES gradients in the place of origin. An important shortcoming of the handful of prior studies in this area is that they are mostly descriptive, they focus only on a handful of health outcomes and, importantly, do not avail themselves of suitable data from place of origin. In this paper we use data for adult people (aged 20+ stratified in age groups: 20-39 and 40+) from NHANES (1999-2010) for the U.S. and from ENSANUT (National Health and Nutrition Survey, 2006) for Mexico. Rather than relying solely on self reported health-the workhorse indicator in this area of study- we examine three sets of measured health outcomes: 1) individual components of the metabolic syndrome (MetS) including high risk glucose, triglycerides, HDL cholesterol, blood pressure and waist circumference; 2) the MetS summary index; and 3) body mass index. These are all indicators of latent physiological processes responsible for the bulk of morbidity and mortality both in the US and in Mexico. We focus on education as an indicator of social and economic standing, partly because it is the education-health gradient that is most prominent in this area of research and partly to establish continuity with past studies on differential SES gradients by migrant status. Our indicator distinguishes three educational groups: low education (0 to 6 years of schooling for those living in Mexico and without a high school degree or GED for those living in the U.S.), medium education (7-11 years for those living in Mexico and high school diploma or GED for those living in the U.S.) and high education (completed high school and above for those living in Mexico and college or more for those living in the U.S.). In contrast to previous findings, we find steep SES gradients in Mexico on waist circumference, obesity and the MetS and, consistent with past studies, we find shallower gradients among Mexicans in the U.S. This contrast between the US and Mexican SES health gradients involving powerful cardiometabolic biomarkers has not been recognized before and constitutes a blow to the conjecture that Mexican migrants in the US express lower SES health gradients because such is also the case in their place of origin. We speculate that gradients will steepen during the evolution of the epidemiological and nutrition transitions. We wrap up by discussing the implications of our results for the aging of immigrant generations in the United States.

### ***How Does International Migration Affect the Health of Elderly Parents Left Behind? Evidence from Mexico***

*Francisca Antman*

This paper considers whether the health of elderly parents is adversely affected by the international migration of their adult children. Estimation of a causal effect is complicated by the fact that there may be unobserved factors influencing both parental health and child migration. I address this endogeneity problem by using instrumental variables methods and perform falsification tests to support the view that the causal mechanism operates through children's migration. Overall, the evidence suggests that having a child migrate to the U.S. raises the probability that the elderly parent in Mexico will be in poor health.

### ***Children's Resources and Parents' Health in Mexico***

*Jenjira Yahirun*

This project asks how adult children's socioeconomic resources influence older parents' physical health in Mexico, where older adults often face a lack of access to institutional resources and rely on kin, primarily children, as a main source of support. Educational expansion over the past decades as well as continued internal and international migration highlights the greater resources that adult children have access to, compared to older parents. Although previous research suggests variation in the association between older adult's own resources and health outcomes, this project broadens the scope to include how adult children's resources might alter what we know about health's socioeconomic gradient in middle-income countries such as Mexico.

### ***Health and Adequacy of Support in Old Age: How the U.S.-Mexico Migration Affects Health Outcomes of Mexican Return Migrants***

*Stipica Mudrazija, Bill Vega, Mariana Lopez-Ortega, and William Sribney*

The patterns of migration between Mexico and the United States have potentially critical impact on the adequacy of support systems in both nations. This study examines differences in health as well as availability of family support and its relationship with health for aging Mexican return migrants compared to nonmigrants. Data come from the 2001-2012 waves of the Mexican Health and Aging Study (MHAS). We fit Cox proportional hazards model for the age of occurrence of three outcomes: any chronic condition, any deficiency in the activities of daily living (ADL), and any deficiency in instrumental activities of daily living (IADL). Preliminary results suggest that return migrants in Mexico family experience slower functional decline than nonmigrants, but there is no difference with respect to chronic conditions. Availability of family support is positively related with better health across the three outcomes of interest. However, recent findings on increased family disruption among migrants coupled with the secular trend of decreasing family size raise the prospect of insufficient future availability of family support for aging Mexican return migrants who are also less likely to receive public support - pensions and healthcare - than nonmigrants.

### ***Health Insurance and the Aging: Evidence from the Seguro Popular program in Mexico***

*Susan Parker, Joseph Saenz, and Rebeca Wong*

This paper analyzes the impact of the Seguro Popular on utilization of services and health status of the aging population in Mexico. While several previous studies have analyzed the short term (1-2 years) impacts of the Seguro Popular program, our study is one of the first to estimate the health impacts of the Program a decade after program implementation. Our study also innovates by analyzing the impacts of the program on the aging population, whereas previous studies have mainly focused on working age adults and children. For the empirical analysis, we use the Mexican Health and Aging Survey, a longitudinal survey of the population age 50 and over with 3 rounds over the period 2001 to 2012. Our results show significant and large effects of the Program on health indicators primarily on the aging rural population. Significant positive impacts were found on utilization and diagnostic/preventive tests in areas

where health insurance was much less prevalent prior to the Program. In urban areas, the only observed effects were on utilization.

### ***The effect of changes in educational composition on adult female mortality in Brazil***

*Cássio Turra*

The last century in Brazil witnessed profound changes. Female life expectancy at birth increased from 34.6 years in 1910 to 77.26 years in 2010. At the same time, the educational composition of the population has changed dramatically. In the 1940s, only 25 percent of the children aged 5 to 14 years were enrolled in school. Currently, nearly all children aged 7 and 14 years attend school. We examine the extent to which changes in the age-specific distribution of education have contributed to the decline in adult mortality among women in Brazil. Our analysis follows other applications in the literature to measure the reduction in mortality that would occur if exposure to specific risk factors were changed to a counterfactual level. The effects are not trivial: about 41% of life expectancy gains at age 30, between 1960 and 2010, are attributable to changes in educational composition of the female population.

### ***Cognitive functioning and gender differences in urban areas of Mexico and Bogota, Colombia***

*Rafael Sampert-Ternent*

Aging in Latin America is occurring at a faster rate compared to most developing countries. Cognitive function has become an important health dimension for researchers on aging because it significantly affects independence and quality of life among older adults. Both economic and health factors have been shown to affect the type and rate of decline in cognitive function. Sociodemographic characteristics explain part of the variation observed in cognitive function, however, there are few cross-national comparisons that have evaluated cognitive function and cognitive impairment in Latin America. Latin America has unique characteristics that have resulted in a unique aging process. This process must be assessed to identify potential interventions to prevent and better manage cognitive impairment. We use data from the third wave of the Mexican Health and Aging Study (MHAS 2012) and the SABE Bogota Study 2012 and compare cognitive function stratified by gender. Similar rates of cognitive impairment were observed in both studies. We also found educational and gender differences within each country, in cohorts with similar mean education and age distribution. We analyzed the role of comorbidities in cognitive impairment by gender in both countries. Finally, we explored different cognitive domains to determine whether there is a global variance in cognitive function between countries or whether the affected cognitive domains differ by country.

### ***Prevalence of Pre-diabetes and Undiagnosed Diabetes among Mexican Older Adults***

*Soham Al-Snih*

**Objective:** Diabetes is the leading cause of disease burden, higher health service utilization, healthcare costs, and mortality in Mexico. Research indicates that Mexico has higher prevalence of persons with diabetes. However, no studies have described the prevalence of pre-diabetes and undiagnosed diabetes in Mexico. The purpose of this study is to estimate the prevalence of pre-diabetes and undiagnosed diabetes among Mexican adults aged 50 years and older.

**Method:** A secondary analysis was conducted using a national sample of cross-sectional data of year 2012, the third wave of the Mexican Health and Aging Study. Covariates included demographic characteristics, body mass index, waist circumference, alcohol drinking, smoking status, hypertension, and family history of diabetes. The primary outcome variable of our study was number of pre-diabetes and undiagnosed diabetes cases. Hemoglobin A1C (HbA1c) criteria was used to define the pre-diabetes and undiagnosed diabetes cases. HbA1c levels between 0 - 5.6 % were classified as normal, HbA1c levels between 5.7 to 6.49% was classified as pre-diabetic, and individual with HbA1c levels  $\geq 6.5$  % were classified as having diabetes. Logistic regression was computed to examine the factors associated with pre-diabetes and undiagnosed diabetes after adjusting for covariates.

**Result:** The prevalence was 46.1% for of pre-diabetes and 27.7% for undiagnosed diabetes. The prevalence of pre-diabetes was significantly higher among female (26.9%) compare to male (19.1%). The

prevalence of pre-diabetes was higher in the age group between 50-65 years (24.4%) than age group >65 (17.7%). Similarly the prevalence of undiagnosed diabetes varied significantly between age group 50-65 years (15.4%) and >65 years (10.2%).

Conclusion: The study reveals high prevalence of pre-diabetes and undiagnosed diabetes in the Mexican older adults in a national sample using HbA1c biomarker. The increasing prevalence of pre- and undiagnosed diabetes should be major concerns for the Mexican government.

### **Closing Keynote Address**

#### ***Will the Latino Mortality Advantage Endure?***

*Noreen Goldman*

Mexicans and other Latino groups have experienced a survival advantage compared with their non-Latino white counterparts for decades. However, increases in the incidence of obesity and diabetes among Mexicans both in the US and Mexico suggest that this advantage may soon disappear. Other phenomena, including biomarker profiles of Latinos in the US, relatively high rates of disability in the older Latino population, and increases in environmental stressors for immigrants, support this prediction. However, the complexity of Latino health patterns, in particular the atypical combination of health advantages and disadvantages relative to other ethnic groups, calls this expectation into question.

### **Emerging Scholar Poster Session Abstracts**

#### ***Latin Dance and Health Education: Influence on Cognitive Function***

*Susan Aguiñaga*

Disparities exist between Latinos and non-Latino whites in cognitive function, putting Latinos at increased risk for dementia and disability. Physical activity (PA) can improve aspects of cognition and protect against disability. However, older Latinos are not physically active at recommended levels. Dance is a culturally appropriate form of PA for older Latinos that challenges individuals both cognitively and physically. A pilot randomized controlled trial used a subsample of the official Spanish version of the Uniform Data Set (UDS) of the National Institute on Aging Alzheimer's Disease Center Program to test the impact of the BAILAMOS© dance intervention on cognition. Participants were randomly assigned to the 4-month, twice-weekly dance intervention; or to a health education control group. Participants were low active, older, Spanish-speaking Latinos, N=44, M(SD) age=64.9 (5.9), 81.8% female, 81.8% Mexican, Years in US=31.2 (16.8), years of education =7.0 (4.3). A repeated measures multivariate ANOVA revealed an overall multivariate effect  $F(11,32) = 3.54, p < .05$ . Follow-up univariate analyses found an effect for several measures of cognition, including a Logical Memory test ( $p < .05$ ), in which the dance group improved significantly more than the health education group; and Digit Modalities test in which both groups significantly improved over time ( $p < .05$ ). Results indicate that participation in regular dance has the potential to improve aspects of cognitive functioning. It is possible that regular dance may have improved episodic memory (Logical Memory test) and psychomotor speed and visuospatial function (Digit Modalities test) as dancing requires participants to recall and execute a dance sequence in a timely manner and in response to others' actions. Both conditions were exposed to structured and routine learning, which may have influenced cognitive function. Future studies should examine these relationships in a larger trial.

## ***Understanding the Mental Health Burden of Physical Disability for Latinos: A Longitudinal Analysis***

*Robyn Lewis Brown*

Motivated by evidence that physical disability is associated with a greater risk for depression among Latinos in the U.S. compared to non-Hispanic Whites and African Americans, this investigation sought to identify the social risk factors most relevant for race/ethnic variation in depressive symptoms over a three-year period. Using data from a U.S. community study of men and women ages 20-93 with physical disabilities (N=417) in Miami-Dade County, Florida, an SEM analysis assessed the extent to which individual stressors (i.e., major and recent life events and chronic strains), social stressors (i.e., major and day-to-day discrimination and perceived stigma) and psychosocial resources (i.e., mastery, self-esteem and social support) account for race/ethnic variation in changes in depressive symptoms over the study period. Findings reveal that, for all Latinos in the study sample, increases in functional limitation are associated with a greater increase in depressive symptoms compared to persons of other races or ethnicities, though the pattern of findings was less pronounced among persons of Cuban ancestry. Tests for conditional indirect effects reveal that this pattern of findings largely derives from the mediating effect of perceived stigma in attenuating the effect of changes in functional limitation on changes in depressive symptoms – this mediating effect is significantly stronger for Cubans and other Hispanics compared to non-Hispanic Whites. Post-hoc analysis demonstrates that, although the effect of perceived stigma is observed among Latinos of all ages in the sample, its effect is most pronounced among younger adults. Additionally, the effect of perceived stigma is most salient among Latinos who are unemployed. Taken together, these findings indicate that in circumstances in which Latinos with physical disabilities feel socially devalued, they are most at risk for depression – and, these circumstances appear to be importantly linked to employment and age-based norms or expectations.

## ***Concordance of Disability Measurements across Races***

*Phillip Cantu*

Using data from the National Health Aging Trends Survey (NHATS) and the Hispanic Established Populations for the Epidemiologic Study of the Elderly (HEPESE), we will examine different physical, social, and psychological mechanisms that are related to the way that elderly define limitations. Differential rates of self-reported disability between races may be partially driven by the ways in which different racial groups understand and define disability. Using objective measurements of functioning (POMA's), we compare how different racial groups self-report their abilities to carry out activities of daily living (ADL's). Specifically, we study concordance (agreement between multiple measures) of measured ability to walk across a room with self reports of ability to walk across a room. Prevalence of both self-reported and objectively measured ability to walk across a room varies by race and age. Preliminary results show that while rates of concordance dependent on failing the observed test are similar across races, the consequences of concordance vary by overall prevalence rates per race i.e. while the same percentage of blacks and whites experience disability discordance this results in a much larger population for blacks because of their higher rates of POMA disability in the first place, with Hispanics falling somewhere in between. We will extend previous research on concordance of disability measurements for Mexicans to see if patterns hold across different races.

### ***Health differentials of older Hispanic immigrants by age at arrival***

*Elisha Cohen*

Increasing numbers of Hispanic immigrants are arriving to the United States at ages 50 and above. Current immigration policy gives preference to family reunification and sets a low financial threshold—125% of absolute poverty thresholds—to sponsor relatives. Welfare and immigration reforms implemented in the mid 1990s attempted to mitigate fiscal impacts of immigration by requiring sponsors to sign a legally enforceable affidavit attesting to their financial responsibility for the sponsored relative (IIRIRA) and imposing a 5-year moratorium on access to Medicaid (PROWRA). There is little evidence evaluating healthcare needs and service utilization of foreign-born seniors. In light of rising health care needs of the aging US population, it is important to understand both the health status at arrival of immigrant seniors as well as changes in health status and care needs as these immigrants age *in situ*. Using the 2003 New Immigrant Survey (NIS) we examine variations in self-reported health and other health indicators of new immigrants by age at arrival and address whether the immigrant advantage obtains for late-age immigrants. Our focus on Latin American immigrants will be informed by comparisons with late-age arrivals from other regions and a sample of native-born Hispanics using the 2003 National Health Interview Survey (NHIS). Finally, we will use the recently released NIS follow-up survey conducted from 2007-2009 to analyze changes in health status and health care utilization as immigrants legally admitted in 2003 age into eligibility for public health care benefits. Older immigrants often experience worse economic outcomes than native-born because of more limited access to means tested public programs since the 1996 immigration and welfare reforms. Not only do late-age immigrants have fewer potential working years to earn access to social security benefits and Medicare, but depending on their home country work histories, likely have limited retirement savings. Because health and economic well-being are so closely linked, it is important to study whether this disadvantage of older immigrants persists to health outcomes as well. This study will provide useful information for evaluating the fiscal consequences of current immigration policy.

### ***Family Size and Old Age Well-Being: Effects of the Fertility Transition in Mexico***

*Carlos Díaz-Venegas*

Fertility has declined substantially in the previous century in Mexico. We aim to determine how family size affects psychosocial, economic and health well-being in old age differently across two cohorts with declining fertility. We use the 2012 Mexican Health and Aging Study (MHAS) including respondents and spouses age 50+ (n=13,091). Poisson (standard and zero-inflated) and logistic regressions are used to model determinants of well-being in old age for these dimensions or “baskets”: psychosocial (depressive symptoms and life satisfaction), economic (household consumer durables and health insurance) and health (chronic condition count). In the younger cohort, having fewer is associated with fewer depressive symptoms, better economic well-being, and fewer chronic conditions. For the older cohort, having fewer children is associated with lower life satisfaction, lower economic well-being, and higher odds of being uninsured. Lower fertility seems to have been beneficial for the younger cohort (born after 1937), whereas the older cohort (born in 1937 or earlier) benefitted from lower fertility only in the health basket (chronic conditions). Further research is needed to continue exploring the old-age effects of the fertility transition.

### ***Obesity and Healthcare Trends Among Older Adults in Mexico from 2001 to 2012: A comparison of the MHAS data***

*Kerstin Emerson*

Obesity is increasing at an alarming rate and constitutes a serious public health crisis. The obesity epidemic is not only a problem in high income countries such as the United States; developing countries, such as Mexico, are also confronting emerging obesity epidemics. In fact, among the 24 OECD countries, the two nations with the highest proportion of obese adults are the U.S. (35.9%) and Mexico (30%). Research has firmly established a link between obesity and increased risk of mortality, as well as elevated risk for numerous health conditions. This higher risk of morbidity is linked to significant increases in healthcare utilization and cost. This paper examines the trends of obesity among Mexican elders within the context of Mexico's current epidemiologic transitions and the new healthcare reforms. We use data from the 2001 and 2012 Mexican Health and Aging Study (MHAS), focusing on persons aged 60 and older. The data confirms that the Mexican older adult population is getting more obese, with the largest increase in obesity among those aged 60-69. At the same time, the older adult population has seen increased access to healthcare, largely due to the implementation of Seguro Popular. The data shows that Seguro Popular has been successful in reducing the disparities in access to care among specific older adult vulnerable populations, including obese elders and those living in rural areas. Implications of trend findings on healthcare expenditures and costs will be discussed.

### ***Low Acculturation and Greater Longevity among Mexican-origin Elders***

*Marc A. Garcia*

This study explores the potential role of acculturation on estimates of active life expectancy based on Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (I-ADL) among Mexican-origin men and women ages 65 and older. We employ 17 years of data from the Hispanic Established Population for the Epidemiologic Study of the Elderly to calculate multistate life tables and provide detailed comparisons specific to level of acculturation and gender. Overall life expectancy is modestly higher for individuals who report lower levels of acculturation. Both males and females with low or medium acculturation spend a larger fraction of their elderly years with disability. While Mexican elders with lower levels of acculturation live slightly longer, on average they spend more years in a disabled state. Given the rapid aging of the Latino population, the prevention and treatment of disabilities should be a major public health priority.

### ***The effects of emotional constructs on cognitive constructs in a sample of older adults from Costa Rica***

*Mauricio Garnier-Villarreal*

This project looks at the effect of three emotional constructs on four cognitive constructs in a sample of older adults from Costa Rica. The emotional constructs evaluated are depression, positive and negative affect. The cognitive constructs included are memory, executive functions, and autobiographical memory (episodic and semantic). We start by showing the correlations between these constructs, to later emphasize on the predictive direct and indirect effects. The focus of these effects is on autobiographical memory; autobiographical memory research indicates that encoding, storage, and recall of this kind of information is relatively maintained in dementia. It is also believed that that autobiographical memories form a core component of reminiscence therapy: The analysis of the characteristics of personal memory, one that refers to

evocation of past events in a subject. Reminiscence is a successful therapy with people with memory problems. Our goal is to understand better the temporal or thematic organization of autobiographical memory, its function, and its potential as a psychosocial intervention for age-related memory loss and dementia. We will show the direct effect that the emotional constructs have on the cognitive constructs, also we worked on the indirect effect that the emotional constructs have on the autobiographical memory constructs through memory and executive functions. These results indicate that there are clear effects on these relationships. On another element we showed how the two autobiographical memory constructs (semantic and episodic) are almost indistinguishable from each other, until we take into account the effect of memory and executive functions out of them, then they become clear distinguishable constructs.

### ***Center for Hispanic American Research Methods (CHARM)***

*Mauricio Garnier-Villarreal*

The Center for Hispanic American Research Methods (CHARM) is a cooperative of US and Latin American research laboratories interested in coordinating biobehavioral research. The first goal of the CHARM is to create a multilingual applied clinical research library (to-date over 400 unique instruments in 850 different applications) that can be shared widely by investigators throughout the US and Latin America to facilitate high quality biobehavioral research on medical issues germane to Hispanic Americans. It uses state-of-the-art data standards that specify a research lifecycle (the Data Documentation Initiative – version 3; DDI-3). By applying this international data standard to the clinical research instrument library, the CHARM offers participating investigators a database of well-described clinical instruments and code libraries that bootstrap the investigative process. An investigator assembles a neurocognitive battery using a flexible assessment battery approach. The selected battery can be implemented using Computer Assisted Testing (CATI), REDCap (both online data entry or email surveys), LIME Survey and its associated Optical Character Recognition (OCR) software (QueXF), or more traditional Paper-and-Pencil via PDFs. The DDI standards creates the database frame so that investigators move quickly to collect the data as well offering open source tools to facilitate data entry and verification. Finally these shared data standards provide a rational heuristic to pool data across sites, thus increasing power to detect meaningful differences while distributing the research costs, and subject burden. So long as a cooperative of multisite investigators used similar DDI standards (instrumentation, question phrasing and collection methods – all specified by the CHARM library) then those data can be pooled to answer a shared research question. This framework promotes a coordinated, interdisciplinary approach to research while allaying some of the administrative burden of deploying a research project by an (usually) over-encumbered investigator. Although we use validated and published translations wherever possible, there are many clinical instruments that need still translation by trained clinicians (about 2/3 of the library). We are establishing an online referee process for these translations as well coordinating the translation assignments.

### ***Projections and operational scenarios on aging and health***

*Roberto Ham-Chande*

Population projections, life expectancies and healthy life expectancies glimpse into the future to seek policies and programs to better manage population aging. To achieve this purpose it is essential to build scenarios under projection assumptions offering practical planning options identifying, assessing and quantifying future effects of potential programs and interventions. We

propose a system for the population 60+ suitable for Latin America and the Hispanics in the US to evaluate longevity related to present and past SES. Mortality models, epidemiological patterns, the burden of disease, and the estimation of demographic and health parameters consider socio-economic diversity in Latin America and Hispanics. Demographic modeling shows that increased disability accompany increases in life expectancy or, at best, leave healthy life span unchanged. Obesity rise suggests future older people cohorts facing more health challenges than those reaching old age today. As people age, they are less likely to a single disease. Instead, competing causes of death associated with aging cluster within aging individuals elevating mortality risk, frailty and disability. Statistical, demographic and actuarial approaches have the key collaboration of the National Institute of Geriatrics for health and epidemiological inputs. Population projections are correlated to the life-cycle within its historical environment. For projections mortality takes the central assumptions but migration has a special role. Using records, statistics and longitudinal surveys on health and aging, mortality and health are analyzed by causes and SES. Future health and mortality are discussed using an intuitive approach on life and health expectancies translated into cohort projected rates of incidence, prevalence and mortality. Times at onset of disease and disability and their duration in relation to severity and dependence are estimated. A software is being developed for this specific study, including applications on prevention plans, actuarial budgeting, and financing.

***Who cares for older adults in Mexico? An estimation of informal care using data form the National Time Use Survey 2009***

*Mariana López-Ortega*

The number of older adults in Mexico is rapidly increasing bringing about important social and economic changes. While the majority of older adults is still independent and highly functional, the increase of chronic diseases is expected to impact their future health care needs. Currently, long-term care strategies are practically non-existent, and less than a third of older adults receive a pension. In this context, the family has traditionally been their major pillar of health and economic support. In the near future, this will be challenged by changes in family size and structure, migration processes, and the increasing participation of women in different activities outside the household. Using the National Time Use Survey 2009, this study explores the supply of informal care for the elderly in Mexico. Statistical analyses include descriptive statistics and regression models to explore factors associated to the decision of taking up care and time spent caring. Consistent with studies in other countries, the majority of care in terms of number of care givers and time spent caring is done by women with 65% and 80.5% of the totals, respectively. Regarding the effect of socioeconomic characteristics, results show statistically significant differences in providing informal care by educational level and working condition, but not by income level. The results reconfirm the fact that support and care for older adults is largely the responsibility of other household members and within the household, of women. There is an urgent need to estimate the costs generated by this informal care for older adults. Decision makers in the health and social development ministries must recognize the burden of care taken up at the household level and generate strategies in order to generate a true co-responsibility between self-care, informal care and formal care, and ultimately insuring accurate care for this population group.

## ***Health and Adequacy of Support in Old Age: How the U.S.-Mexico Migration Patterns Affect Health Outcomes of Mexican Migrants and Return Migrants***

*Stipica Mudrazija*

The patterns of migration between Mexico and the United States have potentially critical impact on the adequacy of support systems in both nations. This study examines availability of family support and its relationship with health for aging Mexican migrants living in the United States compared to the U.S.-born Mexican Americans, and for return migrants compared to nonmigrants in Mexico. Data come from the 2001-2012 waves of the Mexican Health and Aging Study (MHAS) for the sample of return migrants and nonmigrants in Mexico and 2000-2012 waves of the Health and Retirement Study (HRS) for the sample of U.S.-born Mexican Americans and Mexican immigrants in the United States. We fit Cox proportional hazards model for the age of occurrence of three outcomes: any chronic condition, any deficiency in the activities of daily living (ADL), and any deficiency in instrumental activities of daily living (IADL). Preliminary results suggest that return migrants in Mexico who receive time support from children experience slower functional decline than those without children's support, and similar pattern is observed for support with chronic conditions. For nonmigrants, we do not observe this association. The results for the United States are similar as migrants experience faster health decline in the absence of (coresident) children helpers, and no such difference is observed for older U.S.-born Mexican Americans. Preliminary findings imply that family support may be comparatively more important determinant of health for aging migrants (in the United States) and return migrants (in Mexico) than for nonmigrant individuals who are more likely to receive public support – pensions and healthcare – in their old age. However, recent findings on increased family disruption among migrants coupled with the secular trend of decreasing family size raise the prospect of insufficient future availability of family support for aging Mexican migrants and return migrants.

## ***Elderly Mexican Immigrants in the United States***

*Juan José Li Ng,*

Mexican immigration to United States has a long historical tradition, with structural roots and implications on both sides of the border. Early migrations began in the mid-nineteenth century, but it was in the course of the twentieth century that their population flows became important. In 2012, the Mexican immigrant population residing in United States reached a figure close to 12 million people. One feature that becomes relevant is the growth in the volume of this population that is elderly, from 1997 to 2012 the share of persons aged 60 or older increased from 6.6 to 10.6 percent. The objective of this research was to analyze the main socioeconomic and labor characteristics of the elderly Mexican immigrants that reside in the United States in the period 1997-2012. In addition, we compared them to other groups of elderly: immigrants from other countries, U.S.-born Mexicans, and natives. The analyzed data were stratified in four periods of four years each, in an attempt to match the U.S. political and administrative period. The main source of information comes from the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) prepared by the U.S. Census Bureau and Bureau of Labor Statistics.

## ***How Do Legal Status Moderate the Relationships Among Acculturation, Neighborhood Characteristics, and Health of Hispanic Adults?***

*Aggie J. Noah*

Individuals' health in adulthood and mid-life has important implications for their health when reaching older ages and undergoing healthy aging within the life course framework. Implications of health in adulthood are not only lasting but also cumulative; thus, investigating complex factors affecting Hispanic adult health is imperative for understanding the dynamics of Hispanic aging in the United States. In this study, we investigate the moderating role of legal status on the relationships among individual- and contextual factors and health. Using the Los Angeles Family and Neighborhood Survey, our sample is restricted to Latino adults aged 20 and older (n=1,920). We investigate the impact of individuals' acculturation and neighborhood characteristics on three health outcomes (self-rated health, smoking and drinking behaviors) using logistic regression models. In addition, we investigate how Hispanic immigrants' legal status moderates these relationships among acculturation, neighborhood characteristics and health. Our preliminary findings indicate foreign-born Hispanics are healthier compared to their native counterparts despite having lower socioeconomic status, consistent with the Hispanic epidemiological paradox. Health portrait of foreign-born Hispanics does not differ much by their legal status; yet in more nuanced analyses, we find that only Hispanic immigrants who lived less than 15 years in the United States show favorable health outcomes, and this advantage is greater for documented than undocumented Hispanics. Furthermore, perceived neighborhood characteristics (i.e., "informal social control") and neighborhood social ties only matter for documented foreign-born Hispanics. These findings demonstrate that Hispanic immigrants' legal status plays a critical role in understanding their health. They highlight the importance of incorporating the intersectionality of immigration status, acculturation and legal status into health and aging research for Hispanics. We argue that public policy to promote adult health and healthy aging for Hispanics should consider these heterogeneities within the Hispanic population for designing more effective policies.

## ***An assessment of the temporal relationship between depression and disability onset in an older Hispanic Origin population***

*Lawrence Panas*

The association of depression and disability among older adults has long been of interest to researchers. Studies investigating the relationship between temporal associations of disability and depression have found stronger relationships of disability leading to depressive symptoms than vice versa. Given the rapid rise in the proportion of older adults of Hispanic origin, it is important to understand the disablement process and related conditions like depressive symptoms. Many studies that attempt to understand temporality look only across two time points of varying lengths for their analysis. The limitation of this approach is that it assumes that depressive symptoms are fixed from one period to the next and that it will provide a meaningful relationship. Since many studies ask about depressive symptoms in a way that confers a short term effect, the association between disability and depressive symptoms between two waves may not be meaningful. Previous research from the Hispanic Established Populations for the Epidemiologic Studies of the Elderly (PEESE) showed that there was a correlational relationship between depressive symptoms and disability but did not explore the temporal relationship between these elements among Hispanic older adults. This study is the next step in evaluating the temporal relationship between depression and the onset of disability across a longitudinal study

of older Mexican Americans. This study will use the Hispanic EPESE, which tracks across 8 waves from 1993-1994 to 2011-2012, to model the relationship between non-disabled and non-depressive Hispanics at Wave 1 across multiple waves. A variation of simultaneous equation modeling will be utilized to address lag effects of depressive symptoms and physical disability and their covariates over time (controlling for known fixed and variable covariates). The findings from this study will be used to inform clinical and community interventions through the development of recommendations based on outcomes of this research.

***A Cross-National Comparison of Disability-Free Life Expectancy among Adults Age 65 and Older in the United States, Costa Rica, Mexico, and Puerto Rico***

*Collin F. Payne*

The pace of population aging in Latin America is nearly unprecedented. A typical country in Latin America will reach a population with 15% of individuals over the age of 65 in less than half the time this shift took in the US. Though there has been a substantial expansion of life expectancy at older across Latin America in recent decades, evidence on how these additional years are spent (whether the older population is healthy or subject to a high burden of disability) is still lacking. There is substantial debate on the extent to which poor early life nutritional and epidemiological environments may affect later life health among the elderly in Latin America. My research uses recent longitudinal data to investigate differences in the aging process in four settings in Central and North America (Mexico, Costa Rica, Puerto Rico, and the US) with similar levels of  $e_0$  and  $e_{60}$  but substantially different demographic and epidemiological histories. I find that life expectancy in disability in the three Latin American contexts is fairly similar to the US, though there is substantial variation by sex. The overall burden of disability is slightly higher in Puerto Rican and Costa Rican females when compared to the US, and Costa Rican males have the longest life expectancy and disability-free life expectancy. Though the elderly population of Costa Rica and Mexico (and, to a lesser extent, Puerto Rico) lived many years exposed to a poor childhood conditions and a very different epidemiological context than prevails in these countries today, their functional health in later life is comparable to that in the US. Successive generations entering into later life have spent less and less time subject to poor epidemiological conditions in childhood and young adulthood, and thus health conditions among Latin America's elderly population may indeed improve in coming decades.

***Linguistic and Cultural Adaptation of The Geriatric Depression Scale and The Promis® Physical Function Item Bank to be used in Under-Served African American and Latino Elders***

*S. Paz,*

To evaluate the clarity of items in the Geriatric Depression Scale (GDS) and the Patient-Reported Outcomes Measurement Information System (PROMIS®) physical functioning item bank among African Americans and Latinos aged 65 and older. This study will use cognitive interviews to identify potential problems in using these widely used measures with older minorities. Readability analysis will be performed at the item level of both instruments. Face-to-face cognitive interviews will be conducted with 10 African-Americans, 10 English-speaking Latinos, and 10 Spanish-speaking Latinos. Results and potential suggestions for improving problematic items will be summarized at the conference. We anticipate that cognitive interviews of older African-Americans and Latinos will reveal problematic items that are not fully understood. We will suggest alternative wording for these items. The proposed study will serve

as basis for future evaluation of revised items that assess two main domains of health in these under-served minority populations.

### ***Protective effects of familism in Hispanic populations in the United States***

*Casie L. Peet*

*Familismo* or familism is a cultural value frequently seen in Hispanic cultures, in which a higher emphasis is placed on the family unit in terms of respect, support, obligation and referent. Familism has been implicated as a protective factor against mental health problems and may foster the growth and development of children. 26 studies were methodically collected to assess the protective effects of familism in a meta-analytic review. Data from the studies were comprised and organized into 5 categories: depression, suicide, internalizing symptoms, externalizing symptoms, and substance use. The Cohen's D of each value (dependent variable in comparison to familism) was calculated. Results were weighted based on sample sizes (n) and total effect sizes were then calculated. Based on the established Cohen's D effect sizes, small (.2-.499), medium (.5-.799) and large (.8+), effect sizes were then labeled. It was hypothesized that familism would be a protective factor for depression, suicide, internalizing and externalizing symptoms and substance use in Hispanics. The results of this meta-analysis showed little to no effect of familism on the five dependent variables. There were small effects for suicide and internalizing symptoms and no effect for depression, externalizing symptoms, and substance use.

### ***Family Dynamics and Wellbeing among older Hispanics during the Recession***

*Maria Perez-Patron*

According to the 2010 Census one-fifth of older adults are members of a minority group and Hispanics, who constitute the largest minority group in the United States, make up about 7% of those age 65 or older. As the composition of the older population in the United States becomes more heterogeneous, understanding their diverse family histories and family-relations will have important implications when assessing access to support and wellbeing at older ages especially for those groups of the population that are more vulnerable. This study uses data from the 2008 Survey of Income and Program Participation (SIPP) to look at the family dynamics and access to care of the Hispanic elderly, both native and foreign-born. The SIPP is a nationally representative sample of the non-institutionalized U.S. population 15 years and older from whom sociodemographic and income information is collected every four months for the duration of the panel (2008-2013). The extensive income information has made the SIPP a dataset better known in poverty research, but a diversity of other topics are covered through the topical modules that are added to the core survey every quarter. This makes the SIPP an attractive, albeit underutilized, dataset in aging research. For this study, the SIPP will provide information on union and fertility history, migration history, household composition, and adult wellbeing. This will allow to better understand the role that families played in providing access to formal and informal resources among Hispanic older adults during the recent recession period. It will also allow looking at differences by nativity and citizenship, which are particularly relevant to the Hispanic population in the United States.

### ***Inequality and Cumulative Disadvantage Among Immigrants***

*Adriana M Reyes*

Concerns about growing income inequality in the United States have entered the political discourse, as inequality has reached levels not seen since the 1920s (Desilver 2013). With

globalization and changes to economy, the U.S. often imports labor to fill lowest jobs. Debates about income inequality seldom talk about immigrants, and generally only think about immigrants at the bottom of the income distribution. Given the growth of high skill migrants in the U.S., my research will examine not only immigrants in terms of overall inequality in the U.S., but inequality among immigrants. This paper attempts to answer three questions 1) where do immigrants fit into the U.S. inequality picture, 2) how much inequality exists among immigrants, 3) Do immigrants experience cumulative disadvantage? I plan to answer these questions using the SIPP from the year 2010, and use a concept of income that accounts for household size, underreporting of income, and asset wealth as an income stream. This concept of income will then be used to describe magnitude and distribution of income. Inequality will be measured by calculating the gini coefficients. I will look at income inequality in total population and see where immigrants fit in and I will look at income inequality among immigrants. I will test the cumulative disadvantage hypothesis by looking at gini coefficients across ages, and for immigrants I will also look at it by age at arrival. Building off pre-existing research. I find that immigrants are represented disproportionately in the lowest quintiles of the income distribution, and these immigrants tend to have lower rates of citizenship, English proficiency, and are more likely to be from Latin America than any other region. I also find that inequality among immigrants is higher than in the total U.S. population, with noticeably higher gini coefficients for immigrants beginning at age 25.

### ***Time use assimilation among the elderly Mexican population in the U.S.***

*Mauricio Rodríguez-Abreu*

Time use among elderly population, especially Mexican origin groups, has received little attention in the literature. Remaining active at older ages can have positive consequences in physical and mental health. At older ages, time spent in paid work and housework is supposed to be reduced from the peak observed during previous ages; time in care, leisure and social activities, on the other hand, will present mixed behaviors depending on particular characteristics of the population such as the presence of other members of the household, availability of time, economic resources and cultural norms. Time use assimilation refers to the adoption of patterns of time allocation by immigrants groups in the U.S. As immigrant population spends more time in the country, time use patterns should resemble those from other ethnic groups. At the same time, the time use patterns of second and above generation of immigrants are expected to show little differences when compared to other native ethnic groups. The main purpose in this research is to determine if the time that elderly Mexican population spends in the everyday activities is different from the patterns of time allocation of other racial and ethnic groups in the U.S., after controlling for the demographic characteristics of the populations in the study. Particularly, I focus in the time spent in paid work, housework, care activities, and leisure and social activities.

### ***Neighborhood Cohesion and Caregiver Burden among the Mexican-origin Population***

*Sunshine Rote*

Neighborhood environments impact health in the extent to which they provide resources and safety to their inhabitants. Previous research indicates that elderly foreign-born Mexican American adults tend to live in homogenous neighborhoods that may provide socio-cultural benefits that protect against health decline (Markides, Angel, & Peek, 2013). For example, Eschbach and colleagues (2004) found that older Mexican Americans living in the southwestern U.S. and in high density immigrant areas tend to have more favorable health profiles and a

slower health decline over time than those in low density areas. Few researchers, however, have examined the influence of neighborhood resources and support on caregiver burden in general and among the Mexican-origin population in particular. Using data from Wave 7 of the Hispanic Established Population for the Epidemiological Study of the Elderly (H-EPESE, 2010/2011, n=847), we find that caregivers providing support to elderly family members who report high levels of neighborhood solidarity report less depressive symptoms than those providing care to elderly living in less cohesive neighborhoods. Supportive neighbors may help one another in a number of capacities that allow for older adults to remain in the community and reduce caregiver burden including assistance with instrumental activities of daily living such as providing transportation to the grocery store, and help with housework or emotional support.

### ***Translating the Hispanic EPESE from database to clinical-based interventions for older Mexican Americans living in South Texas***

*Jennifer Salinas*

The Hispanic EPESE study has been the source of a wealth of information on aging in Mexican Americans for over twenty years. It has been the basis for uncountable papers, theses and dissertations, providing us a framework for understand not only aging, but Hispanic health in the United States. In the project we propose an approach for translating findings from the Hispanic EPESE into clinically relevant targets for interventions using an approach that is cultural and socioeconomically sensitive to the needs of the older Mexican American population living in South Texas. We will use the Hispanic EPESE data to develop cumulative risk models for mortality based on diabetes, hypertension and depression status. Based on the findings from this modeling we will generate target points for an intervention using Cox proportional hazard and cumulative risk models. We will describe ways in which clinic staff and promotoras could make use of these findings to develop clinical interventions and educational programs to reduce the burden of disease for older Mexican Americans with diabetes and hypertension or depression. Initial results from the data analysis indicates that a cumulative model of diabetes, average blood pressure, depression, years of education and nativity has the highest strength in predicting mortality than models that also include past heart attack, stroke, cognitive function, and smoking. Translating findings from large-scaled databases, like the Hispanic EPESE, to clinic-based interventions could be an important next step for moving forward the science of Hispanic aging and health.

### ***Violence and Health in older adults in Colombia: The SABE Bogotá study***

*Rafael Samper-Ternent*

Violence has always affected humans. Mental and physical health, quality of life and healthcare access are affected by psychological and physical violence. In Latin America, violence in older adults is prevalent and often poorly addressed by authorities. Additionally, data on this topic derived from population based studies, is limited.

Objective: To estimate the prevalence of violence and identify factors related to violence among older adults in Bogotá, Colombia. Data is from the SABE Bogotá study, a cross-sectional study conducted in 2012, in Bogotá. Sample was collected by multistage clusters with a response rate of 81.9% representing 2,000 community-dwelling adults 60 years and older. The questionnaire included 7 questions asking respondents to identify violent situations in their lives, to identify the perpetrator, whether or not help was obtained and if violent displacement was experienced. Prevalence of violence was estimated and then logistic regression models used to identify factors

associated to violence. The overall prevalence of violence was 43.3% (862), 27% reported suffering verbal abuse, 19.4% physical abuse, 16.4% reported being robbed, 2.8% reported sexual abuse, 8.7% reported violent displacement and 0.3% reported being kidnapped. Women had higher prevalence of sexual abuse and physical and verbal abuse  $p < 0.05$ . Conversely, men had higher prevalence of robbery  $p < 0.05$ . In the multivariate analysis, no education, lower social class, chronic obstructive pulmonary disease (COPD), depression, anxiety, living alone, and no health insurance increased probability of experiencing violence.

High prevalence of violence was found among older adults in Bogotá. No education, certain comorbidities, poor mental health and lower socioeconomic status, significantly increase the probability of experiencing violence in this group. Future studies need to address reversible factors that increase probability of violence and tailor interventions to protect older adults from experiencing violence and ensure recovery for older victims.

### ***Facets of Socioeconomic Position and Disability Onset and Progression: The Case of Mexico*** *Joseph Saenz*

United States research has found education to predict disability onset while income predicts disability progression. This framework has not been applied to developing countries experiencing rapid aging such as Mexico to understand socioeconomic status (SES) disability pathways. To determine if education is associated with Activities of Daily Living (ADL) disability onset and if income is associated with disability progression (new ADL disabilities among those with existing disability). Data come from the Mexican Health & Aging Study and include respondents age 50+. Full analyses will use all three Waves of data (2001-2012), longitudinal mixed-effect models and instrumental variables for education and income. In preliminary logistic and multinomial regression models using only Waves one and three, lower education and income were associated with disability onset but neither were associated with disability progression. Pathways between SES and disability may differ across the United States and Mexico.

### ***A Measure of Stress of Immigration (SOI)*** *Sternberg RM*

For many Mexican immigrant women, the immigration experience includes stressors related to separation from family, low socioeconomic status, language barriers and xenophobia stemming from national anti-immigrant sentiment. These stressors can present immigrant women with feelings of loss and depression. A valid and reliable measurement of immigration stress is necessary for clinical assessment of mental health and for the development and implementation of culturally congruent interventions.

Objectives: To develop and test psychometric properties of a new instrument to measure the stress of immigration in lower income Mexican immigrant women living in the San Francisco Bay area. We developed a new Stress of Immigration (SOI) measure consisting of a self-report, 22-item questionnaire designed to measure stress related to: language use, documentation, work and employment, culture and family, and life in the U.S. The new SOI measure was field-tested with 133 lower income Mexican immigrant women.

Participants reported experiencing “a lot of stress” and “severe stress” when answering questions related to lack of legal documentation, fear of deportation and family separation. The internal consistency reliability (Cronbach’s alpha) score for the overall SOI measure was 0.94, and for the five subscales the scores ranged from 0.81 to 0.92.

The SOI measure fills a gap in measuring specific stressors in low-income Mexican immigrant women. This easy to administer, valid and reliable measure constitutes an important step towards the advancement of culturally appropriate mental health interventions for lower income immigrant women living in the U.S.

### ***Gender, migration and late-life health: Conditional effects of spousal U.S. migration on the health of older Mexican women***

*Jacqueline M. Torres*

This research project responds to the growing interest in family member migration as a social determinant of health for those who remain in countries of origin. I use the 2001 Mexican Health and Aging Study to estimate the association between spousal U.S. migration in the past, and late-life depression, diabetes, and hypertension for middle-aged and older Mexican women. Influenced by gender and power theory as it applies to migration research, I use a life-course perspective with attention to how the late-life health effects of spousal U.S. migration differ based on women's own labor and migration histories, as well as current marital status and socioeconomic conditions. I find that spousal U.S. migration is associated with significantly greater odds of hypertension (OR: 1.41,  $p < 0.01$ ) and diabetes (OR: 1.73,  $p < 0.001$ ) for older Mexican women who were not in a union at the time of the survey. In addition, the association between spousal U.S. migration and late-life health outcomes appears to be conditional on women's own labor and migration histories: the adverse effects of spousal U.S. migration on later-life diabetes are exacerbated for women who labored in domestic occupations over their lifetime; and the adverse effects of spousal U.S. migration on later-life hypertension are exacerbated for women who never migrated themselves. There was no significant association between spousal U.S. migration and late-life depression, even accounting for conditional effects by women's labor and migration, respectively. These findings point to the importance of family member migration as a social determinant of chronic disease, with detrimental health effects that may persist into late-life. But, consistent with the expectation that multiple life-course characteristics have powerful influence on old-age health, the results also support the idea that the health effects of spousal U.S. migration are not uniform, and depend in part on women's own histories of labor and migration.

### ***Increasing Physical Activity among Older Latino Adults***

*Priscilla Vásquez*

Physical activity is a form of disease prevention that can improve cognitive and physical health. Currently, the recommendations are 150 minutes per week of physical activity. Recent research shows that on average, Latino men and women participate in recreational physical activity for only 12.7 and 10.2 minutes, respectively, per day. A pilot randomized controlled trial (RCT) tested the impact of the BAILAMOS© dance program on lifestyle physical activity. Participants were randomly assigned to a 4-month, twice-weekly dance program or to a health education control group. Participants (N=57) were low active, older [ $M (SD)$  age= 64.9 (5.9)], Spanish-speaking Latinos [81.8% female, 81.8% Mexican, years in US= 31.2 (16.8), years of education = 7.0 (4.3)]. Participants completed the CHAMPS physical activity questionnaire pre- and post-program. There was a main effect for time in minutes of light, moderate, and vigorous leisure physical activity (LMVLPA) per week  $F(5.2) = (p < .05)$ . The dance group reported 650.6 (472.5) minutes of LMVLPA at baseline and reported 817.8 (529.4) minutes of LMVLPA at post testing. The health education group reported 522.8 (368.6) minutes of LMVLPA at baseline and reported

628.9 (387.5) minutes of LMVLPA at post testing. The dance group increased the amount of time of LMVLPA by 345.2 minutes compared to the health education group which improved by 106.1 minutes. Participation in a dance program that is culturally tailored may increase physical activity in multiple domains. Strategies to increase physical activity may directly impact the health of older Latinos.

### ***Children's Resources and Parents' Health in Mexico***

*Jenjira Yahirun*

This paper asks how adult children's socioeconomic resources influence older parents' health in Mexico, a context where older adults often lack access to institutional resources and rely on kin, primarily children, as a main source of support. Previous research largely focuses on the association between an individual's own education and his/her own health. This framework overlooks the importance of familial resources as crucial elements in the full array of socioeconomic resources that influence individual health problems. Therefore, this paper asks how adult children's resources – broadly defined by their educational attainment – affect parents' health, above and beyond parents' own socioeconomic resources. Using data from Wave 1 of the Mexican Health and Aging Study, we find that children's education is negatively associated with parental health outcomes, even after controlling for parents' own education. Specifically, parents whose children all received some post-secondary schooling were less likely to report a functional limitation than parents with no children who completed any post-secondary schooling. The number of functional limitations that parents of highly educated children report is also fewer. The association between children's education and parents' health is highly robust and withstands controls for parents' and children's traits including parents' and offspring financial status. Currently, we are adding Waves 2 and 3 of the MHAS data for a richer longitudinal analysis. We will examine how children's education affects parent's physical health trajectories as well as parental mortality. Preliminary analyses show that offspring education is indeed negatively associated with the timing of parents' death. Understanding whether adult children's education is important for parental health, in addition to parents' own education, could help identify the elderly who are most at risk for poor health and health declines, better comprehend the intergenerational benefits of education, and shed light on the health advantages and disadvantages across socioeconomic groups.

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