

method to describe and compare the experience of prosocial activity during a typical week for these two groups of highly engaged adults. While prosocial activity carries both costs and rewards, these show differences as well as similarities for the two groups. Implications for research and practice are discussed.

SESSION 2000 (SYMPOSIUM)

INTEREST GROUP SESSION—INTERNATIONAL AGING AND MIGRATION: AGING SOCIETY: INDIVIDUAL, FAMILY, AND COMMUNITY COLLABORATION FROM A GLOBAL PERSPECTIVE

Chair: Noriko Toyokawa, *California State University San Marcos, San Marcos, California, United States*

Discussant: Vivian W. Lou, *The University of Hong Kong, Hong Kong, P.R.C., Hong Kong*

The purpose of this symposium is two-fold: (1) to promote mutual understanding and communication regarding the long-term caregiving plans for older immigrants/refugees between policymakers and researchers in the fields of behavioral and social sciences and (2) to discuss the needs for connecting local needs of older immigrants/refugees and their families with a global plan for aging society. The symposium is structured by three empirical studies on older adults and their caregivers by behavioral and social sciences researchers, followed by a presentation of the needs for an international convention on the rights of older people by an advocate in the global network to promote older people's health. Miyawaki and colleagues focus on the residential status quo, family relations, and prevalence of chronic diseases among older Vietnamese refugees in Houston, TX, U.S.A. Liu's qualitative study on Taiwanese professional caregivers' perceptions of clients in adult daycare services reveals the relation between staff's negative image of aging and their practice. Toyokawa conceptualizes middle-aged Mexican immigrants' sense of family obligation, as their obligation for reducing children's caregiving burden and the endorsement predicts their well-being. Three presenters point out the need for standards for basic needs of refugees/immigrants, staff training, and the quality of long-term care, and discuss the meaning of culturally sensitive support based on their studies. Finally, Marumoto advocates the need for an international convention of the rights of older people and standardization of the quality of long-term care. Specific approaches to 'harness the network' between local and global efforts are discussed.

I WILL KEEP CONTRIBUTING TO MY FAMILY: FAMILY OBLIGATION AMONG OLDER ADULTS WITH MEXICAN IMMIGRANT BACKGROUNDS

Noriko Toyokawa¹, *1. California State University San Marcos, San Marcos, California, United States*

Providing care of older parents is a family obligation for children with Mexican cultural contexts (Knight et al., 2010). Nevertheless, little is known about how parents with Mexican cultural backgrounds believe about their family obligations. The current study conceptualized Mexican American older adults' sense of family obligation. Data was collected from 307 Mexican Americans (Mage=54, SD=8, range 45-77 years old, females=56%) through an

online survey. A 2-factor model: Expectation on children's caregiving (3-item) and Efforts to reduce children's burden (7-item) were identified as the best-fit model through EFA and CFA analyses (CFI=.96, SRMSA=.4). The component of efforts to reduce children's burden predicted participants' generativity assessed by the scale of McAdams and Aubin (1992). The findings suggest that Mexican American older adults expect their children to take care of them, as they feel obligated to reduce their children's caregiving burden. The function of the cultural value in intergenerational relations is discussed.

WHY DO WE NEED AN INTERNATIONAL CONVENTION ON THE RIGHTS OF OLDER PEOPLE?

Mika Marumoto¹, *1. HelpAge International, London, United Kingdom*

This presentation discusses the increasing need for an international convention on the rights of older people. Such a convention would contextualize global, regional and national demographic shifts and identify gaps in existing international human rights laws, so as to better protect older persons' rights to health and well-being. Persons aged 60 or above are expected to more than double from 2015 to reach 2 billion in 2050, with their proportion of the world population rising from 12% to 21%. By 2050, 80% of older persons are expected to live in societies that are currently labeled developing countries. Existing international human rights instruments fall short regarding pensions and protection from poverty. The presentation demonstrates ongoing global efforts, specifically through the UN Open-ended Working Group on Ageing, to set global rights-based standards, and the roles played by civil society organizations that use network approaches in advocating for the rights of older people.

HEALTH STATUS OF OLDER VIETNAMESE REFUGEES: RESULTS FROM THE VIETNAMESE AGING AND CARE SURVEY (VACS)

Christina E. Miyawaki,¹ Nai-Wei Chen,² Oanh L. Meyer,³ Mindy Thy Tran,⁴ and Kyriakos S. Markides⁵, *1. Graduate College of Social Work, University of Houston, Houston, Texas, United States, 2. Beaumont Research Institute, Beaumont Health, Royal Oak, Michigan, United States, 3. University of California, Davis, Sacramento, California, United States, 4. University of Houston, Houston, Texas, United States, 5. University of Texas Medical Branch, Galveston, Texas, United States*

Over 1.3 million Vietnamese including refugees migrated to the U.S., after the Vietnam War. Vietnamese are the 4th largest Asian ethnic group in the U.S. Despite the number, little is known about their health conditions. To fill this gap, the Vietnamese Aging and Care Survey (VACS) was developed, and sociodemographic and health data on 132 refugees (≥65 years) were collected in Houston, Texas. They were on average 75.4 years-old, retired (77%), married (58%), female (55%) with less than high school education (86%) in poor/fair health (76%). They immigrated around age 49 years-old, and have hypertension (74%), arthritis (48%), and diabetes (41%). They manage their lives by living in a multi-generation tightly-knit enclaves, and show resilience to their low sociodemographic status (≤25K, 94%).

Findings suggest healthcare professionals to introduce more social services such as adult daycare programs in culturally-sensitive ways to ease their transition to new lives in the U.S.

PROFESSIONAL CAREGIVERS' PERCEPTIONS OF PEOPLE WITH DEMENTIA AT ADULT DAY SERVICES IN TAIWAN: THE EFFECTS ON CLIENTS

Chih-ling Liou¹, 1. *Kent State University, North Canton, Ohio, United States*

This study aims to explore staff perception of their clients with dementia in five ADS centers in Taiwan. Focused ethnography was used to collect data from 45 individual interviews with nurse's aides, nurses, social workers, housekeepers, volunteers, bus drivers and centers' directors and 600 hours of field observations. The findings from the content analysis revealed two themes reflecting ADS staff's attitudes towards clients: (1) labeling the clients as "old" or "sick" to distance themselves from the clients and (2) viewing the clients as their aging relatives and over-helping them. Both attitudes not only affected staff-client relationships but also influenced how clients viewed themselves by inducing self-labeling of incompetent and dependent. More dementia-specific and communication training is needed for staff at ADS centers in Taiwan to change their attitudes and behavior toward clients with dementia. With a more positive attitude of people with dementia, the prerequisites for person-centered care will improve.

SESSION 2005 (SYMPOSIUM)

INTEREST GROUP SESSION—MEASUREMENT, STATISTICS, AND RESEARCH DESIGN: ANALYSIS OF DEVELOPMENTAL AND COMPLEX SYSTEMS: UNDERSTANDING THE DYNAMICS OF AGING

Co-Chair: Xiao Yang, *Pennsylvania State University, University Park, Pennsylvania, United States*

Co-Chair: Nilam Ram, *Pennsylvania State University, University Park, Pennsylvania, United States*

Discussant: Nilam Ram, *Pennsylvania State University, University Park, Pennsylvania, United States*

Aging is the product of numerous dynamic processes that span multiple domains of functioning (e.g., biological, psychological, social), multiple levels of analysis, and multiple time-scales. Scientific inquiry in many fields has benefited from articulation and analysis of complex systems. This symposium brings together a collection of papers that illustrate how dynamical systems modeling is contributing to both theory and understanding of aging. Yang and colleagues apply Boolean network approach to intensive longitudinal data to identify sequences of emotion and behavior that lead to a stable equilibrium, and suggest how that information can be used to design interventions that push individuals toward a healthier equilibrium. Rector and colleagues illustrate use of dynamic indicators and multiscale entropy measures as indicators of resilience and explain how those measures may be used in prediction of physical recovery. Brick highlights how sequence mining methods can be used to identify commonalities and differences in dynamic change, and how those patterns characterize and distinguish groups with respect to aging trajectories. Moulder

and colleagues demonstrate how latent maximum Lyapunov exponents can be used to study sensitivity of individuals' developmental trajectories to initial conditions. Boker and colleagues provide a general overview of how dynamic models, including an adaptive equilibrium regulation model, distinguish resilience to acute versus chronic stressors and patterns of regulation. Together these papers highlight the value complex system thinking can add to our understanding and optimization of aging.

OPTIMIZING INDIVIDUALS' DAILY FUNCTION: A BOOLEAN NETWORK APPROACH FOR IDENTIFYING INTERVENTION SEQUENCES

Xiao Yang,¹ Xiao Yang,¹ Nilam Ram,¹ David Conroy,¹ Aaron Pincus,¹ and Denis Gerstorff², 1. *Pennsylvania State University, University Park, Pennsylvania, United States*, 2. *Humboldt-Universität zu Berlin, Berlin, Berlin, Germany*

Development and aging are the product of a process wherein an individuals' functional components co-act to produce change. System dynamics can be described using a variety of methods. In this paper we illustrate how Boolean network methods may be used to describe the sequences of emotion and behavior states that lead to a stable equilibrium – e.g., healthy function; and the interventions needed to push an individual toward healthier equilibria. We applied Boolean network models to intensive longitudinal data obtained from 150 participants (age 18-89 years) to describe individuals' on-going psychosocial dynamics and identify the specific social behaviors that may be driving them toward undesirable and/or desirable equilibria (e.g., high and low negative emotions). Results are discussed with respect to how they inform theory about developmental systems, and construction of interventions meant to guide individuals toward healthy aging.

RESILIENCE AND RECOVERY IN OLDER ADULTS: A COMPLEX SYSTEMS APPROACH

Jerrald Rector,¹ Jerrald Rector,²

Marcel G. Olde Rikkert,² and René Melis², 1. *Radboud University medical center, Nijmegen, Netherlands*, 2.

Radboud university medical center, Nijmegen, Gelderland, Netherlands

In medicine, we still cannot objectively assess who will recover from health stressors imposed by disease or its treatment. If resilience, the dynamic ability to respond to and recover from health stressors, is considered as an emergent feature of a complex system, then methodology from complexity science may help us quantify the health-promoting features that support the recovery process. This presentation describes ongoing work aimed at empirically testing the concept and predictive value of resilience by examining the extent to which small-scale responses of bodily systems (i.e. heart rate, activity) to natural (micro)perturbations and indicators of loss of complexity are related to physical functioning and recovery throughout the journey of 120 geriatric inpatients. Dynamic indicators of resilience (variance, autocorrelation) and multiscale entropy measures were estimated from continuous heart rate and accelerometer data and compared to measures of patients' physical functioning (e.g., ADLs, frailty) at admission, discharge and 3 months later.