

Section 4

From Knowledge to Action in Cognitive and Mental Health Care for Older Adults

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Previous sections of this book have highlighted that the populations of Mexico and the United States are becoming older (He et al., 2016). The increasing life expectancy in both countries raises critical questions as to whether longer life implies more years of good health and independent living or not. Yet, gains in life expectancy and good health are not equally distributed across these societies, as embedded social inequalities are apparent in health indicators at older ages. Those with access to social privileges (higher levels of education, income, and other bundled advantages associated with high socioeconomic status) often benefit from good health during a greater portion of their lifespans. As these societies get older, families, communities, organizations, and governments will need to work together to find ways to assist the physical, mental, and cognitive health needs of a growing number of older adults and reduce the disparities within and across their countries. In the chapters of this section, the authors' lenses go from broad, conceptual approaches to focused, well-designed interventions, programs, and public policies that can be used to address these challenges and turn them into opportunities for more equitable aging.

The chapter by Antonucci reflects how the life span (of an individual) and the life course (a greater environmental structure) interact throughout the lives of individuals to shape health outcomes at older ages. Antonucci argues that psychology can be powerful in not only changing individual behaviors, but also by having the ability to modify social expectations of aging. The chapter addresses how environmental structures, such as poverty and inequality, have long-lasting effects on individuals and communities. It delves into how naturally occurring resources can be leveraged to create successful interventions and programs. Ultimately, these interventions and programs have the potential to help societies reach important milestones in sustainable development goals, particularly the reduction of poverty and the achievement of gender equality.

The chapter by Torres-Gil and Chen carries on with some of the topics discussed by Antonucci, such as the feminization of aging and the need to improve gender equity. Both chapters also draw on the conceptual framework of the lifecourse perspective. The authors provide a

conceptual roadmap that examines the intersectionality of environmental, social, geopolitical, and family structures, and how they shape individual and population aging. The chapter challenges the reader to reflect more in-depth and critically about aging—how longevity is not a given, how populations age and decline, how morbidities complicate solutions, how the built environment matters, and how filial piety is no longer a given. The authors intertwine these questions with broader macro-level forces, such as populist movements in Mexico and the United States, and how public narratives and perceptions of aging influence political and public responses. They provide an integrated and critical way to examine aging across the borders of these countries. Most importantly, they set the stage for further studies and initiatives to redefine aging more positively, realizing that older adults can be vital resources for societies to flourish. As Armenta and colleagues show in their chapter also in this section, when older adults are valued and protected, younger generations also benefit.

As pointed out by Torres-Gil and Chen, social determinants of health operate throughout the lifecourse of individuals, and exposure to risk factors will impact one's cognitive, mental, and physical health at older ages. The chapter by Vega and Gutiérrez Robledo discusses whether interventions targeting modifiable risk factors could be used to reduce the growing burden of dementia in Mexico. The chapter reflects on how the current knowledge on non-pharmaceutical interventions can be leveraged by communities and public health to generate better outcomes related to brain health. The authors discuss past and present efforts that are helping prepare Mexico for this growing challenge, such as the development of a series of databases on brain health, the establishment of training and educational programs for health professionals, the creation of briefs and sources of information for caregivers, and guides for clinical practice. Most importantly, Mexico has created a national Alzheimer's Plan. Nonetheless, there are still many challenges ahead to finance, implement, and evaluate some of the proposed strategies.

Vega and Gutiérrez Robledo also point out a new opportunity to make further advances by adopting a multidomain program, as Mexico has been invited to join the World-Wide FINGERS (WW-FINGERS) network (Rosenberg et al., 2020). The FINGER program has shown promising results by targeting modifiable lifestyle risk factors (e.g., diet, physical activity, and sleep), which affect vascular and metabolic disorders associated with brain health. These efforts are critical, as Mexicans, like Hispanic/Latino older adults in the United States, are at higher risk for cardiovascular disease and other risk factors (e.g., diabetes) shown to influence cognitive health, including the acceleration of cognitive aging and decline (González et al. 2018; González et al. 2016; Tarraf et al. 2017). Nonetheless, because health at older ages also depends on previous exposures and past behaviors, these programs should be extended to younger cohorts to improve the health outcomes in future generations of older adults.

Even though they are not the focus of Vega and Gutiérrez Robledo, other types of programs and investments over the lifecourse may also improve brain health at older ages. In fact, studies highlighted that differences in cognitive health within countries may be related to low socioeconomic status, reflected in educational levels (Zsembik and Peek, 2001; Brewster et al., 2014; Díaz-Venegas et al., 2016). For instance, older Hispanic/Latino individuals perform worse on cognitive tests than their non-Hispanic White counterparts (Zsembik and Peek, 2001; Sloan and Wang, 2005; Brewster et al., 2014; Díaz-Venegas et al., 2016; Díaz-Venegas et al., 2019). There is also some evidence showing that the prevalence and incidence of dementia is higher among Hispanic/Latino populations relative to non-Hispanic Whites (Mehta and Yeo, 2017; Matthews et

al., 2019). Therefore, improving education may also be a way to benefit future generations of older adults and these societies at large.

Finally, the chapter by Armenta, Aguila, López-Ortega, and Mejía-Arango turns its attention to the mental health of older adults in Mexico, particularly depression. Depression is one of the most common mental health problems among older adults in Mexico (Gutiérrez et al., 2012; Manrique-Espinoza et al., 2013) and is responsible for decreases in quality of life. Like other health conditions, socioeconomic conditions impact mental health, and older adults facing poverty are at increased risk (Flores-Padilla et al., 2016). Therefore, addressing socioeconomic inequalities may be a way of promoting a more equitable society while, at the same time, improving health outcomes. The chapter takes on this question and examines whether the supplemental income program *Reconocer Urbano*, which targeted adults 70 years and older in the state of Yucatan in Mexico, could reduce major depressive episodes beyond the intended economic impact. The program provided older adults with payments of \$1,000 pesos every two months. This chapter offers a rich discussion of how providing secure income by implementing supplemental income programs can improve health outcomes through better nutrition, increased ability to purchase medications, and improved access to health care. These changes, in turn, can also have a positive impact on mental health by reducing anxiety associated with unfulfilled needs and hardships. The authors use econometric methods to analyze the data, and they find that receiving this supplemental income decreased the odds of major depressive episodes among older adults in Mexico. Previous studies based on the same dataset have already indicated the benefits of the program on cognitive health, increased health care use, and food availability (Aguila and Casanova, 2019; Aguila and Smith, 2020). Providing income security for older adults may also foster positive intergenerational exchanges, as more grandchildren move in with older adults who received the benefit (Aguila et al., 2020). These previous findings, along with the ones presented in this volume, highlight how economic security can have broad benefits for older adults as well as younger generations. However, as discussed by Torres-Gil and Chen, how can the expansion of these safety net programs be paid for in the macro contexts of increasing inequalities as well as social and political divides?

The chapters in this section evaluate how macro forces that shape social inequalities influence the health of older adults in the United States and Mexico. They also inform a road map to help develop cognitive aging capacity across the world, including Latin America, and to strengthen initiatives aimed at dementia epidemiology such as the Global Brain Health Institute (GBHI), Research Dementia in Latin America (ReDLat), 10/66 Dementia Research Group, and others. They provide a rich and complex picture of the aging process and how social determinants throughout the life course impact lives and societies. The challenge is upon us to make sure that past progress in life expectancy is not lost and to assure the conditions for current and future generations to live in a more equitable and fairer world. There are many opportunities ahead of us, but the clock is ticking.

References

- Aguila, E., & Casanova, M. (2019). Short-term impact of income on cognitive function: Evidence from a sample of Mexican older adults. *Journal of Aging and Health*, 0898264319841155.

- Aguila, E., Park, J. H., & Vega, A. (2020). Living arrangements and supplemental income programs for older adults in Mexico. *Demography*, 1-24.
- Aguila, E., & Smith, J. P. (2020). Supplemental income program design: A cluster-randomized controlled trial to examine the health and wellbeing effects on older adults by gender, duration, and payment frequency. *Social Science & Medicine*, 259, 113139.
- Brewster, P. W., Melrose, R. J., Marquine, M. J., Johnson, J. K., Napoles, A., MacKay-Brandt, A., et al. (2014). Life experience and demographic influences on cognitive function in older adults. *Neuropsychology*, 28(6), 846.
- Díaz-Venegas, C., Downer, B., Langa, K. M., & Wong, R. (2019). Cognitive functioning of U.S. adults by race and Hispanic origin. In W. A. Vega, J. L. Angel, L. M. F. Gutiérrez Robledo, & K. S. Markides (Eds.), *Contextualizing health and aging in the Americas: Effects of space, time and place* (pp. 85-107). Cham: Springer International Publishing.
- Díaz-Venegas, C., Downer, B., Langa, K. M., & Wong, R. (2016). Racial and ethnic differences in cognitive function among older adults in the USA. *International Journal of Geriatric Psychiatry*, 31(9), 1004-1012.
- Flores-Padilla, L., Ramírez-Martínez, F. R., & Trejo-Franco, J. (2016). Depresión en adultos mayores (AM) con pobreza extrema pertenecientes a un Programa Social en Ciudad Juárez, Chihuahua, México. *Gac Med Mex*, 152, 439-443.
- González, H. M., Tarraf, W., Gouskova, N., Rodríguez, C. J., Rundek, T., Grober, E., et al. (2016). Life's simple 7's cardiovascular health metrics are associated with Hispanic/Latino neurocognitive function: HCHS/SOL Results. *Journal of Alzheimer's Disease : JAD*, 53(3), 955-965, doi:10.3233/JAD-151125.
- González, H. M., Tarraf, W., Vásquez, P., Sanderlin, A. H., Rosenberg, N. I., Davis, S., et al. (2018). Metabolic syndrome and neurocognition among diverse middle-aged and older Hispanics/Latinos: HCHS/SOL results. *Diabetes Care*, dc171896.
- Gutiérrez, J. P., Rivera-Dommarco, J., Shamah-Levy, T., Villalpando-Hernández, S., Franco, A., Cuevas-Nasu, L., & Hernández-Ávila, M. (2012). Encuesta Nacional de Salud y Nutrición: Resultados nacionales. <https://ensanut.insp.mx/encuestas/ensanut2012/doctos/informes/ENSANUT2012ResultadosNacionales.pdf>.
- He, W., Goodkind, D., & Kowal, P. R. (2016). An aging world: 2015. International Population Reports, P95/16-1. Washington, DC: U.S. Census Bureau.
- Manrique-Espinoza, B., Salinas-Rodríguez, A., Moreno-Tamayo, K. M., Acosta-Castillo, I., Sosa-Ortiz, A. L., Gutiérrez-Robledo, L. M., et al. (2013). Condiciones de salud y estado funcional de los adultos mayores en México. *Salud Pública de México*, 55, S323-S331.
- Matthews, K. A., Xu, W., Gaglioti, A. H., Holt, J. B., Croft, J. B., Mack, D., et al. (2019). Racial and ethnic estimates of Alzheimer's disease and related dementias in the United States (2015–2060) in adults aged ≥ 65 years. *Alzheimer's & Dementia*, 15(1), 17-24.
- Mehta, K. M., & Yeo, G. W. (2017). Systematic review of dementia prevalence and incidence in United States race/ethnic populations. *Alzheimer's & Dementia*, 13(1), 72-83.
- Rosenberg, A., Mangialasche, F., Ngandu, T., Solomon, A., & Kivipelto, M. (2020). Multidomain interventions to prevent cognitive impairment, alzheimer's disease, and dementia: From finger to world-wide fingers. *The Journal of Prevention of Alzheimer's Disease*, 7(1), 29-36.

- Sloan, F. A., & Wang, J. (2005). Disparities among older adults in measures of cognitive function by race or ethnicity. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 60(5), P242-P250.
- Tarraf, W., Rodríguez, C. J., Daviglius, M. L., Lamar, M., Schneiderman, N., Gallo, L., et al. (2017). Blood pressure and Hispanic/Latino cognitive function: Hispanic community health study/study of Latinos results. *Journal of Alzheimer's Disease*, 59(1), 31-42.
- Zsembik, B. A., & Peek, M. K. (2001). Race differences in cognitive functioning among older adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 56(5), S266-S274.