Int J Dev Disabil. 2003 Jun;10(2):1-16
9. Rioux M. On second thought: construction knowledge, law, disability and inequality. In Herr S, Gostin L, & Koh H, editors. Human rights of persons with intellectual disabilities: Different but equal. London: Oxford University Press; 2003. p. 287-317.
10. Steele EJ, Layton NA. Assistive technology in Australia: Integrating theory and evidence into action. Aust Occup Ther J*. 2016 Apr 18;63:*381-390
11. Gordon P, Kerzner LM, Sheldon TA, & Hansen EA. Assistive devices in Canada: Ensuring inclusion and independence. Toronto, Ontario: ARCH Disability Law Centre; 2007. 87. Report no.:1.
12. Office of the United Nations High Commissioner for Human Rights. Frequently Asked Questions on a Human Rights-Based Approach to Development Cooperation [Internet]. New York & Geneva: United Nations; 2009 [cited 2019 Jan 2]. Available from: https://www.ohchr.org/Documents/Publications/FAQen.pdf
13. World Health Organization (WHO). A human rights-based approach to health [Internet]. Geneva, Switzerland: World Health Organization; 2009 [cited 2018 Dec 20]. Available from http://www.who.int/gender-equity-rights/knowledge/hrba/en/

Tackling Rising Dementia Burden in Low and Middle Income Countries

Opinion Editorial

Alana Changoor, MSc. Global Health, McMaster University

The world's population is in a phase of rapid ageing, and an unprecedented increase in the number of older adults is expected to occur globally in the coming decades. As of 2015, there were almost 900 million older adults (>60 years old)[1] around the world, and this number is projected to increase to 2.1 billion by 2050.[2] As this "silver tide" approaches, strategies to ensure the specific health needs of this age demographic are provided for, will become increasingly paramount. Of these health needs, dementia in particular is poised to become a uniquely challenging, but critical global health priority.

Dementia is a syndrome characterized by chronic and progressive deterioration of cognitive domains such as memory and thinking, behavior, and the ability to perform ordinary, everyday activities.[1] Dementia is a major source of dependence and disability amongst older adults, with its disease burden contributing to about 6.3% of DALYs in adults over 70 years of age.[3] According to the World's Alzheimer's Report, in 2015 there were over 46 million people around the world living with dementia; and following trends in population ageing, this number is also projected to sharply increase to 131.5 million by 2050.[1] The societal costs will also be significant, with current annual costs circa $818B USD today, but likely to increase to $2 trillion USD by 2030.[1]

Importantly, rapidly ageing populations and rising dementia burden is a phenomenon that is and will continue to disproportionately burden low-middle income countries (LMICs). Rates of increase in dementia burden in LMICs will easily outpace that of HICs in the years to come. This is due in part to projected patterns in population ageing expected in LMICs. Between 2015 and 2050, the number of older adults will increase by 56% in high-income countries, versus an increase of 138% in upper middle-income countries, 185% in lower middle-income countries, and 239% in low income countries.[1] Consistent with these disproportionate rates of ageing, 68% of persons living with dementia in 2050 will reside in LMICs.[1]

Notably, cited projections for dementia burden increase are based on rising growth projections of the elderly population, but stable rates of dementia incidence.[1] However, research suggests that rising incidence rates are likely, due to increasing prevalence of critical risk factors of dementia, such as smoking and poor cardiovascular health, prevalence of both which are increasing more rapidly in LMICs than in other parts of the world[1,4] Another reason these forecasts are likely underestimates is due to a lower rate of awareness of dementia as a disease in LMICS, where cognitive and behavioral changes that are hallmarks of dementia, are instead commonly perceived as a normal part of ageing.[5,6]

High dementia burden in LMICS is particularly problematic since the health systems of these countries have had less time to develop strategies

that are responsive to rapid demographic ageing than their high-income counterparts.[4] Already today, these systems are generally less well-equipped to manage current and projected increases in disease burden than HICs.[4] This is because LMICs are more likely to have underfunded public health systems[5,7], weak or non-existent social supports for older adults[4], and a preponderance of out-of-pocket healthcare financing.[7] Strategies need to be set in place today, so that these LMICs can build the capacity necessary to surmount the double burden of both high infectious disease prevalence, and rising rates of non-communicable diseases such as dementia.[1]

In Western countries, an ageing population structure has been a slower process to manifest[4] and has been accompanied by parallel shifts towards institutionalized care for older adults and use of pharmaceuticals for dementia treatment.[5] The high costs associated with institutionalized care, and pharmaceuticals make them unlikely candidates for dementia management strategies in LMICs, especially due to more commonly embraced cultures of collectivism and family care. The other implication of this, is that any successful LMIC-specific strategy, must also proactively address the social consequences of a dementia care being managed at the level of the household.

According to the Dementia India 2010 report, for example, caregiving can result in economically disadvantaged households, with 25% of all caregivers suffering financially due to missing work, and over two-thirds of older adults reporting financial vulnerability in the country.[9] Feminization of caregiving also perpetuates income inequity between the genders and limits the educational or career objectives of female caregivers.[10] There is also evidence that poor health outcomes of caregivers, predict poorer health outcomes of PwDs, resulting in exacerbation of behavioral or psychological symptoms of dementia, with a snowball effect upon caregiver strain.[11] Being a caregiver for an individual with dementia places one at risk for developing mental health morbidities: the rates of psychiatric morbidities for caregivers of PwDs in developing countries, range from 40-75%.[11]

As a result, new paradigms of care are needed. A social health approach is one viable path forward. A social health approach “acknowledges that a person can experience well-being despite a medical condition, by maintaining a dynamic balance between opportunities and limitations in the context of social and environmental challenges”.[14] With regards to dementia, social health approaches are largely rehabilitative, and include anything ranging from strategies for restorative care, cognitive therapy, and reablement through environmental or lifestyle modifications that can be implemented by family members and lay health workers at the community level.[15,16]

Collectively, the objective of this approach is to help PwDs develop strategies that optimize and prolong their capabilities, and ability to perform daily activities of living, engage in social activities, improve relationships with their caregivers, and ultimately promotes the idea of “living well with dementia”.[15-19] Early research efforts on social health approaches have been promising. Despite lower research prioritization and less funding, existing research on non-drug interventions and/or therapies in dementia care that focus on promoting social health and lifestyle modifications have had equal or greater success in mitigating cognitive decline, and at lower cost.[15,16]

Thus, a social health approach may be a viable way forward in addressing rising burden of dementia in LMICs. Policy-makers should prioritize increased investment into clinical and implementation research on social health approaches for dementia management, and the philosophy of a social health approach should be integrated into the creation of dementia strategies at national levels. Therefore, while a social health approach would ultimately constitute just one tenet of what must be a multisectoral strategy to meet the challenges of an ageing world, its potential to meaningfully improve the lives of older adults in a way that is cost-effective, is an opportunity not to be disregarded.

REFERENCES

1. Prince, M., Wimo, A., Guerchet, M., Ali, G. C., Wu, Y. T., & Prina, M. World Alzheimer Report 2015. The Global Impact of Dementia. Alzheimer’s Disease International. Alzheimer’s Disease International (ADI), 2015. London.
2. United Nations. World Population Ageing Report. Department of Economic and Social Affairs Population Division, 2015.
3. Nichols E, Szoeke CE, Vollset SE, Abbasi N, Abd-Allah F, Abdela J, Aichour MT, Akinyemi RO, Alahdab F, Asgedom SW, Awasthi A. Global, regional, and national burden of Alzheimer's disease and other dementias, 1990–2016: a systematic analysis for the

Global Burden of Disease Study 2016. The Lancet Neurology. 2019 Jan 1;18(1):88-106.

4. Shaji, K. S. Dementia care in developing countries: The road ahead. Indian Journal of Psychiatry, 2009; 51(Suppl1), S5.
5. Ferri, C. P., & Jacob, K. S. Dementia in low-income and middle-income countries: Different realities mandate tailored solutions. PLoS Medicine, 2017; 14(3), e1002271.
6. Prince, M. J., Acosta, D., Castro-Costa, E., Jackson, J., & Shaji, K. S. Packages of care for dementia in low-and middle-income countries. 2009; PLoS Medicine, 6(11), e1000176.
7. Mills A. Health care systems in low-and middle-income countries. New England Journal of Medicine. 2014 Feb 6;370(6):552-7.
8. Shaji, K. S., Jotheeswaran, A. T., Girish, N., Bharath, S., Dias, A., Pattabiraman, M., & Varghese, M. The dementia India report: Prevalence, impact, costs and services for dementia. Alzheimer's and Related Disorders Society of India. 2017.
9. Ingle, G. K., & Nath, A. Geriatric health in India: Concerns and solutions. Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine, 2008; 33(4), 214.
10. Emmatty, L. M., Bhatti, R. S., & Mukalel, M. T. The experience of burden in India: A study of dementia caregivers. Dementia, 2006; 5(2), 223-232.
11. Brodaty, H., & Donkin, M. Family caregivers of people with dementia. Dialogues in clinical neuroscience, 2009; 11(2), 217.
12. Brijnath B. Unforgotten: Love and the culture of dementia care in India. Berghahn Books; 2014 Jul 1.
13. Brijnath, B. R. The legislative and political contexts surrounding dementia care in India. Ageing & Society, 20087; 28(7), 913-934.
14. Dam, A. E., de Vugt, M. E., Klinkenberg, I. P., Verhey, F. R., & van Boxtel, M. P. A systematic review of social support interventions for caregivers of people with dementia: are they doing what they promise?. Maturitas, 2016; 85, 117-130.
15. Dam, A. E., de Vugt, M. E., Klinkenberg, I. P., Verhey, F. R., & van Boxtel, M. P. A systematic review of social support interventions for caregivers of people with dementia: are they doing what they promise?. Maturitas, 2016; 85, 117-130.
16. Vernooij-Dassen, M., & Jeon, Y. H. Social health and dementia: the power of human capabilities. International psychogeriatrics, 2016; 28(5), 701-703.
17. Poulos, C. J., Bayer, A., Beaupre, L., Clare, L., Poulos, R. G., Wang, R. H., ... & McGilton, K. S. A comprehensive approach to reablement in dementia. Alzheimer's & Dementia: Translational Research & Clinical Interventions, 2017; 3(3), 450-458.
18. Bartlett, R., & O'Connor, D. From personhood to citizenship: Broadening the lens for dementia practice and research. Journal of Aging Studies, 2007; 21(2), 107-118.
19. Haslam, C., Cruwys, T., & Haslam, S. A. “The we's have it”: Evidence for the distinctive benefits of group engagement in enhancing cognitive health in aging. Social Science & Medicine, 2014; 120, 57-66.