

Dementia in India Public Health Concern, Situation Analysis

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Received date: 16 October 2013, Accepted date: 15 December 2013

Academic Editor: Paula Isabel Moreira

Abstract

Research motivation: There is a growing realization that the care of older people with dementia makes enormous demands on those who provide care to them. For clinicians, focus is on the assessment of impairment in memory and other cognitive functions. But for public health specialists, it is the socio-behavioural and psychological disruption linked to dementia and the deficits in the Activities of Daily Living (ADL) that are more relevant. The public health concerns on dementia remain unanswered yet in India.

Research design: A systematic review of the work involving studies across populations in India and other nations across the world was conducted, with the aim to arrive at highlighting the concern of public health on dementia in India. Main findings and implications: The fact that dementia is differentially distributed across populations underlie the need to understand the risks involved and the ways to control them. The public awareness about dementia in India is low. Awareness on Dementia needs to be generated based on risk assessment developed through population based studies conducted across populations. Media needs to play its role in this.

Key Words: Dementia, Public health, India

Introduction: Demographic aging is a global phenomenon. It has picked up momentum in low income countries of Asia, Latin America and Africa. India's population is undergoing a rapid demographic transition now. It is important to note that this rapid demographic change is happening along with fast paced social restructuring that accompanies the economic development.

According to the 2001 census, India is home to more than 76 million people aged 60 years and above.[1] This age group, currently comprising only 7.4% of the population, is expected

to grow dramatically in the next few decades. It is estimated that there are already approximately 1.5 million people affected by dementia in India, and this number is likely to increase by 300% in the next four decades. [2].

There is a growing realization that the care of older people with disabilities makes enormous demands on those who provide care to them. For clinicians focus is on the assessments of impairment in memory and other cognitive functions and loss of independent living skills. But for caregivers, and for people with dementia, it is the behavioural and psychological symptoms linked to dementia and the deficits in the Activities of Daily Living (ADL) that are most relevant and impact most on the burden and the quality of life.

Situation understanding: Studies conducted in urban and rural areas in India on dementia reveal a prevalence varying from 1.02% to 3.36%. [3-7] The prevalence of dementia according to these studies is much lower in comparison to the prevalence in developed countries which ranges between 5-10% [8]. Dementia is the umbrella term for a number of neurological conditions. Dementia is a disease symptom, and not a normal part of aging. Vascular dementia is the second most common cause of dementia after Alzheimer's disease.[9]Prevalence estimates of Vascular Dementia in developing countries range from 0.6% to 2.1% in those aged over 65 years. Vascular Dementia might be more common among the Chinese and Malays, whereas Alzheimer's disease is common in Indians and Eurasians. [10]

Over last decade or so, demographic ageing has been proceeding rapidly across the world and India is no exception to this. This has necessitated a focus on previously neglected topic of dementia. [11] With two-thirds of people above 65 years of age living in Low and Middle Income Countries like India, conducting research on dementia received attention. [12] Two studies -the US-Nigeria study [13] and the Indo-US study [14] — arrived at a prevalence of dementia that was only between a quarter and a fifth of that typically recorded in developed

countries. A population based cross sectional survey conducted in Latin America, India and China have arrived at crude prevalence rate ranging from 0.8% in rural India to 4.6% in urban Latin America. The prevalence in urban India was 0.9% while in China; it was 2.4% in rural and 3% in urban areas. [11] The same study pointed compared its estimates with that of pooled estimates from EURODEM meta-analysis. The comparison revealed that the prevalence in urban Latin American sites was about four-fifths of that in Europe, in the Chinese sites it was just over half, and that in rural Latin American and Indian sites only between a quarter and a fifth. [11]

Table 1 provides a review of the prevalence of dementia across different populations. The review reveals that there is a clear cut difference in the prevalence of dementia across populations. This differential distribution points out at the existence of certain risk factors in certain geographical regions and their absence in others.

Situation Interpretation: The missing link in research on dementia is that there seems to be little understanding of the environmental and lifestyle factors linked to dementias. Prevalence and incidence of AD seems to be much lower in some developing regions like India. This may be because some environmental risk factors are much less prevalent in these settings. Conversely, some risk factors may only be apparent in low and middle income countries, as they are too infrequent in the developed economies for their effects to be detected. As per a study done in North India, diabetes, depression, hyperhomocysteinemia, hyperlipidemia, APOE ϵ 4 gene, BMI, use of saturated fatty acids, pickles in diet, urban living, and lack of exercise were associated with independent risk of dementia. The fact that India still remains a predominantly rural nation, with 75% of population living in rural areas may be a factor responsible for lower prevalence of dementia. This factor is substantiated by the fact that dementia is more common in urban India as compared to rural India. [3-7]

Also various dietary factors and sociocultural factors, like cognitively stimulating activities, active socialization, living in joint families, increased intake of polyunsaturated fats, fruits, and salads conferred protection against dementia [15]. Studies conducted on ethnic Kashmiris settled in Jammu district of J&K, after their migration from Kashmir in 1990 in the wake of militancy related conflict in Kashmir region of J&K. [16, 17] These studies revealed dementia in a substantial number of the migrant Kashmiri Pandits. However earlier study conducted on Kashmiri population found dementia to be rare. [18]. Urban and rural studies on dementia from different parts of India have documented lower rates varying from 1.02% to 3.36% above 60-65 years of age. [3, 5, 19, 20].

The focus in dementia research needs to shift towards understanding this difference in prevalence of dementia across populations. An understanding in this differential distribution of dementia across populations will probably pave the way for better understanding of risk factors for dementia. Dementia is reported to be rare in tribal population because of healthy social engagement & physical activity, thereby reducing stress levels in contrast to elderly in urban settings. Barley, wheat, maize and phulan as staple foods and consumption of apples and walnut (rich in antioxidants) may also be helpful. [21].

A parallel in this regard can be drawn with the Kashmir valley study conducted in Kuthar area of Kashmir [22]. The food habits of that population are almost similar to that of this population with an abundance of apples and walnuts. Also, the fact that populations living in isolation/tribal area/high altitude have lower prevalence of hypertension, diabetes, dyslipidemia, obesity; all identified as midlife risk factors for dementia, may be helping them prevent the development of dementia[23].

A relation between literacy and cognitive ability has been studied in past and it has been found that the prevalence of dementia increases exponentially with age. About one third of the population aged 85 and over has dementia [24]. An inverse association between

educational level and the risk of AD or dementia has been reported in some cross-sectional [24-29] and case-control studies [30, 31] but not in others [32-34].

It is this understanding that will help us in planning public health strategies for preventing dementia and reducing disability because of dementia. Our understanding, based on the studies conducted across populations in India on the risk factors for dementia could vary from social disengagement, stress associated with migration from native homes and hearths, differences in lifestyle, longer life expectancy, health awareness and healthcare delivery systems may be the factors contributing to this difference.

Area for action: Prevention and early intervention is the foundation for public health approach to understanding dementia in preventing complications. The good thing is that Alzheimer's disease and other dementias have been reliably identified in all countries, cultures and races in which systematic research has been carried out. The given understanding is that it is differentially distributed, even though; levels of awareness may vary across countries and even within countries. The public awareness about dementia in India, in comparison to the developed world is low [35]. Primary care doctors do not encounter many cases in their practice and there is no special emphasis on dementia diagnosis and management in the training of healthcare professionals. Media interest in dementia and related healthcare issues remain low [35]. This general lack of awareness has serious consequences as concerned families do not seek help and health services do not recognize the problem. With the increase in the number of elderly expected to rise in future and with that an increase in the number of people suffering from dementia also expected, the problem assumes a greater proportion. A look around the world educates us on the initiatives of various governments in dementia care. In this regard few need a special mention. Dementia friends is a government funded national initiative run by the British Alzheimer's society that aims to

educate the public about what it's like to live with dementia. One interesting effort is taking place in the Belgian city of Bruges where a number of measures have been put in place to make the city safe and welcoming for people with dementia. Bruges is turning itself into a dementia-friendly city by making citywide changes such as adding special signs to shop windows indicating that they are safe places for people with the disease. The Netherlands is specifically focused on progressive dementia treatments, according to their National Dementia Programme. One of Japan's main contributions to memory care is known as "learning therapy"—a deceptively simple dementia therapy created by Ryuta Kawashima. During learning therapy, dementia patients are asked to do simple arithmetic problems as well as read aloud from books and stories each day. Many memory care communities in United States are focusing on new dementia treatment techniques to improve the quality of life for residents.

While the media in India is now more receptive to stories on dementia, efforts are required to alert them of the importance of ageing and dementia, and to build their capacity to report, research and understand its local relevance. But the emphasis needs to shift Health care professionals. They need to be geared to the challenge, an ageing population is going to present with. They should be provided with necessary skills to manage not just common health problems affecting older people but also problems like dementia. Medical training needs to reorient itself to meet the healthcare needs of an aging society.

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Table 1: Prevalence of dementia across populations.

Asia			
China	2007	87,761	3.1% (1.5-3.1)
China (Beijing, Xian, Shanghai, Chengdu)	2005	34,807	5.0%
Taiwan	1995-1998	7,149	3.2% (1.5-4.9)
South Korea	1994-2005	7,096	10.1% (7.3-12.9)
Thailand	2001	4,048	3.4% (2.8-4.0)
India	1996-2006	14,767	2.7% (1.4-4.0)
Sri Lanka	2003	703	3.98% (2.6-5.7)
Israel	2002	823	21.1%
Africa			
Egypt	1998	1366	5.93%
Nigeria	1995	2494	2.3% (1.2-3.4)
Latin America			
Cuba	1999	799	8.2% (6.3-10.4)
Argentina	1999	1900	11.5%
Brazil	2002-2008	7513	5.3% (1.5-8.9)
Chile	1997	2213	4.3% (3.5-5.3)
Colombia	2000	1611	1.8% (1.2-2.7) and 3.4% (1.2-5.6)
Peru	2007	1532	6.7% (5.5-8.0)
Venezuela	2002	2438	8.0% (7.0-9.2) and

10.3% (8.3-13.0)

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