

## Alzheimer's the Road Ahead in the Middle East

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### Introduction

Middle Eastern nations have certain cultural, social and monetary attributes in common with similar aspirations. The proportion of elderly in the Region is projected to rise with enhancement of the health care services in the area. The forecast is that in 35–40 years, the young crowds will work their way up the population pyramid, and the elderly population in the Middle East will increase. As anyone might expect, as in aging population somewhere else, the speediest rate of development will be in the extremely old.

The World Health Organization (WHO) evaluates that from 2000 to 2050, the rate of development of the population above age 65 is anticipated to be 4%–5%, and the normal yearly development rate of the most seasoned (85 years and more seasoned) will surpass 5% in eleven Arab nations. In nations like Lebanon, the extent of the elderly is now generally high and will be twofold by the year 2050. Different nations, for example, Qatar, Kuwait, and United Arab Emirates (UAE) ought to expect a fivefold or more increment in their elderly population, and ought to apportion assets in like manner [1-4].

The Region is going through the “Health Transition Phase,” which is described by a remarkable increment in both number and extent of grown-ups and elderly persons [5-13]. The epidemiological results of these progressions will prompt an expanded rate of perpetual issue of seniority and the maturing of the population itself; will make tremendous requests on the health services framework. The quantity of patients with Alzheimer's illness will increment too. So far, there are no agreeable old age services that nurture the elderly [9-13].

### Dementia Prevalence

There is a lack of appropriate knowledge about the nature and extent of dementia problem in the region. Unofficial data in different nursing home facilities in Lebanon revealed a 25 to 30 percent level of depression among residents and 10 to 15 percent of dementia. Data from Alzheimer Disease International claims that currently there are 1.5 million patients suffering from Alzheimer's disease in the region that will increase to seven millions in the coming 30 years.

### Research in the Region

There are scarcity of research and publication in the field in the region. Therefore, Abyad Medical Center and Middle East Network on Research on Ageing (MENAR), which is closely linked to the Middle East Academy for Medicine of Ageing (MEAMA), did a community study on the elderly in Lebanon using the InterRAI Community Health Assessment CHA instrument. The main reason for selecting this instrument is the fact that it is easy to apply in the community and it is a good introduction to the various instruments of InterRAI. The goals of the study included, among others, collecting data on the elderly living in the Middle East. By using the CHA instrument, we will not only be able to compare various elderly communities in the Middle East region to each other, but also to other elderly communities in the rest of the World. In addition, the data obtained can be used to assess the health needs of the elderly in order to deliver solid data for providing future geriatric services that can improve the quality of life of the elderly in the region. We were granted the permission to use the instrument on research basis from InterRAI. With the help of VU Medical

Center in the Netherlands were instrumental in launching the study through financial support. The community study started in Tripoli in 2012, which is the second town in Lebanon. A total of enrolled 800 participants were enrolled in the study. This study through MEAMA stimulated similar study in Dubai and Bahrain. This will eventually lead to possibly starting of InterRAI –Eastern Mediterranean Region.

The CHA contains a brief basic assessment and three supplements: functional supplement, assisted living, and mental health. Initial data analysis from Lebanon revealed a 10% prevalence of dementia in the sample. In 2014, the study was replicated in Dubai. The study was replicated in 300 individuals. The elderly in the study were gathered from the primary health care centers. Data was analyzed using the SPSS Statistics program. The results from Dubai Study were presented in Qatar, Dubai and recently Toronto. In the section on existing diseases: Alzheimer's disease was 3% and other Dementia 2%, whereas as stroke was diagnosed in 5%. As for cognitive skills for daily decision-making 51.7% of the sample was independent whereas the rest have some problems varying from modified independence in 21.7%, minimal impairment in 13%, moderately impaired in 8% and severely impaired in 5%. There were memory problems in 40% of the samples. There was a 20% decline in the ability of decision making as well.

In 2015-2016 a similar study was done in Bahrain. A cross-sectional study was conducted in the nine-day care centers of Bahrain in the summer of 2015. The population of interest is the elderly attending the centers and the non-random quota (convenience) sample size includes 302 of the attending elderlies of these day care centers. The results show that most live in privately owned homes (71.9%) with their offspring (81.1%) and have intact cognitive function (83.1% say they rarely need help deciding).

This community study that was done in three countries is a landmark study at the level of the Middle East in the field of ageing. It will be an important turning point in research on ageing in the region spearheaded by Lebanon and MEAMA.

A study from Lebanon looked at the impacts of cobalamin supplement on cognition in elderly. The study used time series data, gathered in a single-blinded trial of parenteral cobalamin therapy. Subjects with low serum cobalamin and confirmation of cognitive dysfunction were included. An aggregate sixty-two subjects were entered sequentially over a two years' timeframe. Fifty-six subjects finished the study. Subjects got 1000 micrograms of cyanocobalamin intramuscularly daily for 1 week, then weekly for 1 month, then monthly from that point for at least six months. The Folstein Mini-

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mental Status Examination (MMSE), clock drawing tests, and caregiver interviews were regulated both before and at 3 months after full cobalamin substitution treatment.

The theory that intellectual change was reliant on the span of cognitive symptoms. Following at least 12 months of cobalamin treatment, 40 of 56 patient's uncovered cognitive amelioration. There was a conspicuous connection between length of intellectual manifestations and reaction to treatment. Patients symptomatic for <12 months picked an average of six points on the MMSE (combined t test  $P=0.0065$ ), while patients symptomatic >12 months picked up four points (matched t test  $P=0.25$ ). Six patients symptomatic for just 3 to six months standardized their MMSE scores, increasing 1, 2, 3, 6 and 9 points, individually. The author reasoned that there might be a period-constrained window of chance for successful intercession in patients with cognitive decline and low serum cobalamin [13].

In another study on community care for elderly in the Eastern Mediterranean region by WHO 600 patients were studied during 10 weeks period. In the Lebanese samples using the different dementia scales 3.7% of the sample were demented. The percentage was higher as the age of the patient increases it reached a plateau at age 95 years.

In another community study that involved centenarians in Lebanon as part of larger World wide study. A total of 100 patients were studied for various genetic parameters, in addition to demographic and health conditions. The age 100 Age range 98 years to 105 years with a mean of 100.5 years. The prevalence was 3.4% with an average age of diagnosis being 90 years and absence of dementia after 100 year. The patients were relatively healthy, functional and independent.

## Future Needs

There are urgent future needs at the level of health services, education, training and research. The changing monetary and increasing relocation trends lead to the projection that the procurement of long term care will be an imperative piece of health care preparation [1,9-13]. Without precedent for the Middle East the Social Service Association a NGO in the north of Lebanon with a 300 bed geriatric and psychiatric facility, began the first inpatient Alzheimer unit completely furnished with 13 beds and inside greenery enclosure. The author initiated this unit in 2009.

Health Care workers and experts at all levels have gotten practically zero preparing in the care of the elderly. While trying to cover the crevice, the Middle East Academy for Medicine of Aging was established to invigorate the advancement of health care services for the seniors in the area. Various educators and professors from the Middle East and Europe built it up. The Model of MEAMA was taken from the European Academy for Medicine of Aging. The first course took place between 2003 and 2005. The course has been developed with 4 sessions, on each of 4 days that cover essential subjects of wellbeing related issues in seniors [14]. So far five cycles of courses has occurred.

Additionally, Middle East Association for Age and Ageing and Alzheimer's (MEAAA) was set up with a specific end goal to bolster different events in the field of ageing and Alzheimer's disease. At present the affiliation has representation from a few nations in the Middle East. A number of online journals were as well lunched to help promoting the ageing academic field and to encourage research in the area including,

the Middle East Journal of Age and Ageing (ME-JAA) in 2004 and the Middle East Journal of Psychiatry and Alzheimer's. Furthermore the Middle East Network on Aging Research (MENAR) was established in 2006 and is linked to a number of international organizations dealing with elderly issues including InterRAI international. The objective of the MENAR is to empower further research in the field of ageing.

## Conclusion

There is a clear need for better support for aging research in general and for dementia related issues in particular. There is a requirement to design adequate services for the senior population in the region. These services will be needed in order to be able to fill the current existing gaps. In addition there is huge gap in preparing the health care team for an aging population in the region.

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