

Physical stature and education level of diabetic Nigerian women correlated with dementia

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A joint survey by researchers from the Universitat Autònoma de Barcelona (UAB) and Benue State University (BSU) finds that short height and low education levels are characteristic traits of Nigerian

women with type 2 diabetes showing early symptoms of dementia. This work points to the importance of childhood nutrition and education programmes, particularly for girls, in public health improvement strategies in Nigeria. A sustained programme addressing these problems can mitigate a future burden of dementia in the country's adult diabetic women.

Globally, DM2 in mid-life is a recognized risk factor for dementia, but this association is worse in persons of African descent, especially in [women](#). Among African diabetics, development of dementia is more frequent and rapid, and this is associated with different factors such as lifestyle, diet, socio-economy and genetics.

This appears to be the case in Nigeria, which currently contains the largest number of persons (3 million and rising) affected by DM2 on the African continent. This makes the country a good place to study the interaction of varied factors in the development of DM and associated co-morbidities in persons of African origin. In the 1960s, the prevalence of DM in Nigeria was found to be less than 1% but this has risen to 4.6%-10%, depending on the study population within the country, in about 5 decades. Some factors implicated in this surge are ageing, obesity, hypertension, adoption of sedentary living and wide consumption of toxic diet imported from some Western countries.

Taking into account the above information, Dr. Lydia Giménez Llorc (Head of the Medical Psychology Departmental Unit, representative of the Observatory for the Equality at the Faculty of Medicine, and researcher at the Institute of Neurosciences, UAB) and Dr. Efosa Kenneth Oghagbon (Department of Chemical Pathology, Faculty of Basic & Allied Medical Science, College of Health Sciences, Benue State University (BSU) and Consultant Chemical Pathologist and Metabolic Physician at the University Teaching Hospital; BSUTH, Makurdi, Nigeria) carried out a collaborative study that evaluated factors

associating DM2 with dementia in a sub-Saharan population of type 2 diabetic subjects. This comprised 62 female and 47 male patients, who were compared with 53 healthy female and 46 healthy male subjects, with special attention put on the women.

Using two dementia questionnaires/scales, the mini-mental state examination (MMMS) and six item cognitive impair test (6CIT), researchers assessed the impact of anthropometric measures (body mass index, waist-hip ratio, weight and height) and other biodata (sex, age, education level and professions) on the burden of dementia.

The study results showed that diabetic women who had shorter body height and lower level of education had more severe dementia. The women afflicted with dementia had twice the level of illiteracy compared to their healthy counterparts, and this was worse compared to men who were 11 times better in literacy level. The stature or height was the most discriminating factor among the physical measures and the diabetic women in the study were generally shorter. Categorically, the two dementia scales showed that diabetic Nigerian women with shorter stature and poorer education levels had grades consistent with cognitive deterioration.

Physical height is a simple parameter that can be measured by most medical clinics in Nigeria. It should be integrated into routine assessment of diabetic patients, especially women as it can reveal increased dementia risk. The final height of adults is related to early life nutrition and thus there is the need for better feeding in childhood especially among girls and pregnant women.

Dr. Lydia Giménez-Llort emphasised that "...education augments the cognitive reserve of individuals, and this favors brain neuroplasticity and functional development." Furthermore the UAB scientist said that "...in addition to age, complications of diabetes constitutes a key predictive

tool for dementia."

Dr. Efosa K. Oghagbon suggests that "an optimal nutrition at the onset of life can improve cognition and cerebral development in childhood and adolescence; key period during which to attain adequate physical and educational developments of the Nigerian child."

Both authors agree that not only is it important for government and policy makers to emphasise proper childhood nutrition in Nigerians, but should particularly focus on the girl child.

"Our results can aid the development of evidence-based public health approaches to mitigate dementia in communities in Nigeria and the sub-region. This is important as countries in the sub-region including Nigeria cannot sustain healthcare cost occasioned by [dementia](#) and associated issues," opine the two researchers.

More information: Efosa Kenneth Oghagbon et al. Short height and poor education increase the risk of dementia in Nigerian type 2 diabetic women, *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring* (2019). [DOI: 10.1016/j.dadm.2019.05.006](https://doi.org/10.1016/j.dadm.2019.05.006)

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