

Fruit and Vegetable consumption and its associated factors among Indigenous Africans: Insights from the CHAIR Project in H3Africa Consortium

Akinkunmi Paul Okekunle^{1,2†},

Osahon Jeffery Asowata³, Onoja Matthew Akpa^{3,4,5}, Adekunle Fakunle^{1,6}, Tinashe Chikowore^{7,8}, Shukri F. Mohamed⁹, Reginald Obiako¹⁰, Morenikeji Komolafe¹¹, Godwin O. Osaigbovo¹², Godwin Ogbale¹³, Oyedunni Arulogun¹⁴, Fred Sarfo¹⁵, Kolawole Wahab¹⁶, Lukman Owolabi¹⁷, Joshua Akinyemi³, Albert Akpalu¹⁸, Ezinne Uvere¹, Rufus Akinyemi^{19,20}, Carolyn Jenkins²¹, Donna K. Arnett²², Daniel Lackland²³, Bruce Ovbiagale²⁴, Michèle Ramsay^{8,25}, Mayowa Owolabi^{1,20,26} on behalf of SIREN, AWI-Gen and the H3Africa Consortium.

¹Department of Medicine, College of Medicine, University of Ibadan, Nigeria. ²Department of Food and Nutrition, Seoul National University, 08826, Korea. ³Department of Epidemiology and Medical Statistics, College of Medicine, University of Ibadan, Nigeria. ⁴Institute of Cardiovascular Diseases, College of Medicine, University of Ibadan, Nigeria. ⁵Division of Epidemiology, Biostatistics and Environmental Health, School of Public Health, University of Memphis, USA. ⁶Department of Public Health, College of Health Sciences, Osun State University, Osogbo, Nigeria. ⁷MRC/Wits Developmental Pathways for Health Research Unit, Department of Paediatrics, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa. ⁸Sydney Brenner Institute for Molecular Bioscience, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa. ⁹Health and Well-Being Program, African Population and Health Research Center, Nairobi, Kenya. ¹⁰Department of Medicine, Ahmadu Bello University, Zaria, Nigeria. ¹¹Department of Medicine, Obafemi Awolowo University, Ile-Ife, Nigeria. ¹²Jos University Teaching Hospital, Jos, Nigeria. ¹³Department of Radiology, College of Medicine, University of Ibadan, Nigeria. ¹⁴Department of Health Promotion and Education, College of Medicine, University of Ibadan, Nigeria. ¹⁵Department of Medicine, Kwame Nkrumah University of Science and Technology, Ghana. ¹⁶Department of Medicine, University of Ilorin Teaching Hospital, Ilorin, Nigeria. ¹⁷Department of Medicine, Aminu Kano Teaching Hospital, Kano, Nigeria. ¹⁸Department of Medicine, University of Ghana Medical School, Accra, Ghana. ¹⁹Neuroscience and Ageing Research Unit, Institute for Advanced Medical Research and Training College of Medicine, University of Ibadan, Nigeria. ²⁰Center for Genomic and Precision Medicine, College of Medicine, University of Ibadan, Nigeria. ²¹Department of Nursing, Medical University of South Carolina, Charleston, 29425 SC, USA. ²²Office of the Provost, University of South Carolina, USA. ²³Department of Neurology, Medical University of South Carolina, Charleston, 29425 SC, USA. ²⁴Weill Institute for Neurosciences, University of California San Francisco, USA. ²⁵Division of Human Genetics, National Health Laboratory Service, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, 2000, South Africa. ²⁶Lebanese American University of Beirut, Lebanon.

Current smokers, physically inactive individuals, and current alcohol users were less likely to consume fruits and vegetables frequently. Interventions targeted at these lifestyle risk factors might be promising in promoting frequent consumption of fruit and vegetables among Africans.

BACKGROUND

The significance of regular fruit and vegetable consumption in health outcomes has been previously documented, but very limited studies have reported factor(s) associated with fruit and vegetable consumption, particularly among Africans. This study evaluated factors associated with the frequency of total fruit and vegetable consumption among indigenous Africans.

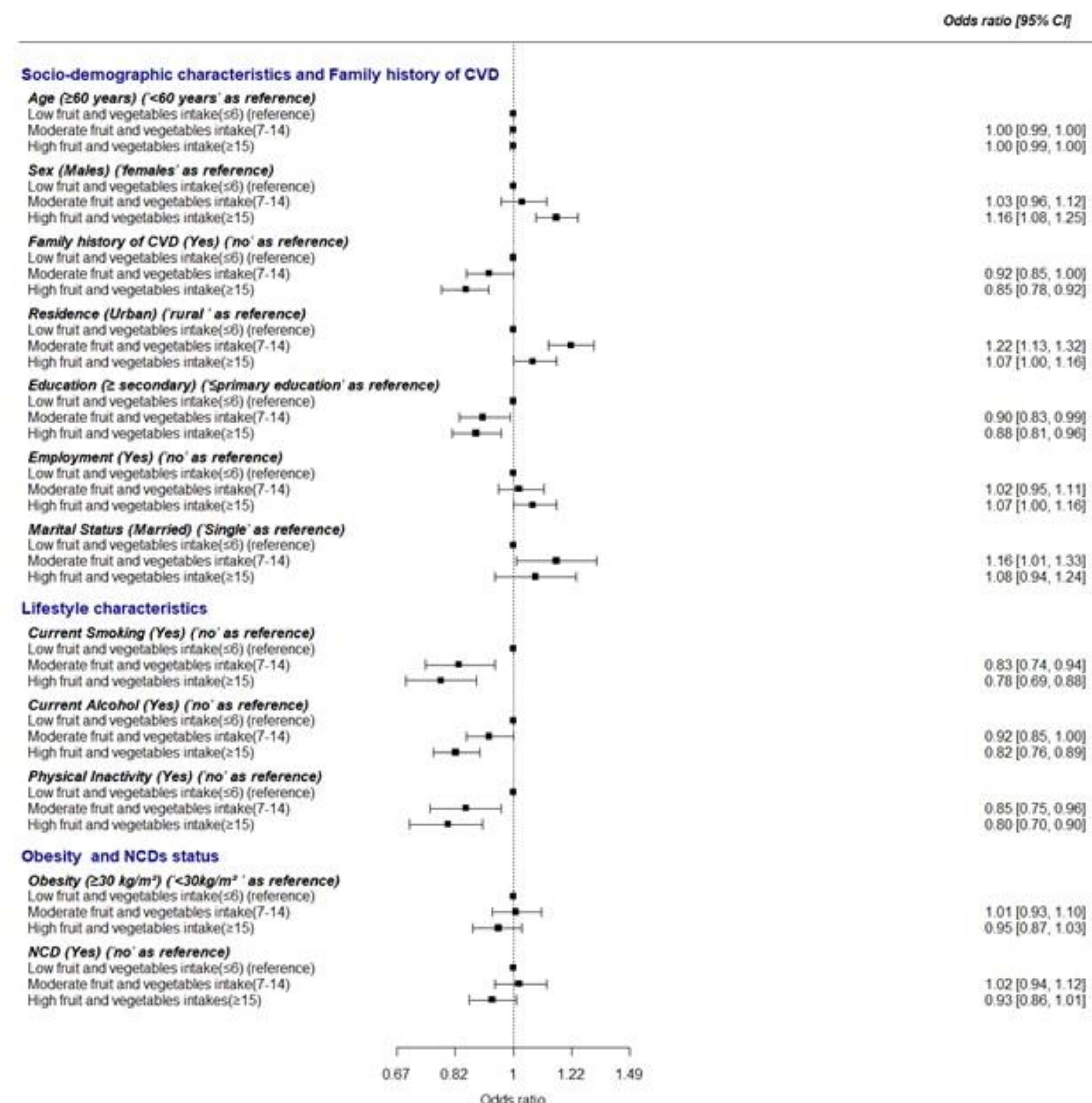
METHODS

We harmonized individual-level data on sociodemographic, lifestyle, and dietary factors among 20,443 adults aged ≥ 18 years recruited from five African countries (Burkina Faso, Ghana, Kenya, South Africa and Nigeria) in the SIREN and AWI-Gen studies. The frequency of total fruit and vegetable consumption (in portions/week) was categorized by the tertile distribution as 'low' (≤6), 'moderate' (7-14), and 'high' (≥15). Polytomous regression models were used to estimate the odds ratios (OR) and 95% confidence intervals (CI) of factors associated with the frequency of total fruit and vegetable consumption (using 'low' consumption as reference) at a two-sided P<0.05.

RESULTS

Overall, 9,802 (47.9%) were male, 9,312 (45.6%) were from rural areas, and the median(IQR) frequency of total fruit and vegetable consumption was 10.0 (4.0, 21.0) portions/week. The OR (95%CI) of factors associated with the frequency of total fruit and vegetable consumption in a single regression model include current smoking [moderate; 0.83, (0.74, 0.94), high; 0.78 (0.69, 0.88)], being physically inactive [moderate; 0.85 (0.75, 0.96), high; 0.80 (0.70, 0.90)], current alcohol use [moderate; 0.92 (0.85, 1.00), high; 0.82 (0.76, 0.89)] and a family history of cardiovascular diseases [moderate; 0.92 (0.85, 1.00), high; 0.85 (0.78, 0.92)].

RESULTS CONTINUED



Forest plots of odds ratio and 95% confidence intervals (CI) of factors associated with the total frequency of fruit and vegetable consumption

CONCLUSIONS

Current smokers, physically inactive individuals, and current alcohol users were less likely to consume fruits and vegetables frequently. Interventions targeted at these lifestyle risk factors might be promising in promoting frequent consumption of fruit and vegetables among Africans.

ADDITIONAL KEY INFORMATION

†Author Contact Information: College of Medicine, University of Ibadan, Ibadan, Nigeria. email: akinokekunle@gmail.com

Data Availability: Individual participant data that underlie the results reported in this article (text, tables, figures and appendices) have been de-identified. The joint dataset is available upon reasonable request. A proposal to access the data should be directed to the senior authors, Professor Mayowa Owolabi (SIREN PI: mayowaowolabi@yahoo.com) and Professor Michele Ramsay (AWI-Gen PI). Data requesters will need to sign a data access agreement. The AWI-Gen phenotype data are available on request to the H3Africa Data and Biospecimen Access Committee (EGA accession number—EGAD00001006425).

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Conflicts of Interest: None declared.

Table 1: Median (Interquartile range – IQR) Distribution of frequency of Fruit and Vegetable Consumption in portions/week among Africans

	All participants	Females	Males
Fruits only	2.0 (0.0, 7.0)	2.0 (0.0, 7.0)	2.0 (0.0, 7.0)
Vegetables only	6.0 (4.0, 21.0)	6.0 (2.0, 14.0)	6.0 (2.0, 14.0)
Total fruit & vegetables	10.0 (4.0, 21.0)	10.0 (4.0, 20.0)	10.0 (4.0, 21.0)

