

## Extended Abstract

Please do not add your name or affiliation

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| <b>Paper/Poster Title</b> | The Cause and Effect of the Nutrition Transition in Nigeria: Analysis of the Value of Indigenous Knowledge & Traditional Foods in Enugu State, Igboland |
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Abstract prepared for presentation at the 97<sup>th</sup> Annual Conference of the Agricultural Economics Society, The University of Warwick, United Kingdom

27<sup>th</sup> – 29<sup>th</sup> March 2023

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| <b>Abstract</b>   | <b>200 words max</b>  |
| <p>This paper uses a mixed-methods quantitative and qualitative approach towards analyzing the presence of the nutrition transition in Nigeria, assessing the role that indigenous knowledge and foodways play in promoting healthy diets, and documenting changing food preferences of an indigenous Igbo community in Enugu State. Data from the Nigerian Living Standards Survey (NLSS) and Demographic Health Survey (DHS) was analyzed to measure the change in obesity, diabetes, and hypertension rates across Nigeria from 2003 to 2018, as well as to trace the changing food purchasing patterns in the country over the same period.</p> <p>The contributions of this paper are fourfold. First, though other studies measure the nutrition transition either more broadly or in other contexts, this is the only study which measures the effects in Igboland, Nigeria through analyzing by comparing the consumption and esteem of local foods overtime. Second, the study also relies on country-wide World Bank data to measure the nutrition transition from 2003- 2018 through analysis of obesity rates, prevalence of non-communicable diseases, and changes in consumption in Nigeria. Third, this study contextualizes the nutrition transition in Igboland through a thorough literature review of African food systems, nutrition, and health that goes back to the 1600s and accounts for the sociopolitical and cultural changes brought upon by European colonialism. Finally, this is the first study to rely on Natural Language Processing to elicit indigenous knowledge and traditional foods in Enugu state. We believe that results from this study will be important for policymakers and international organization concerned about sustainable indigenous, consequences of nutrition transition, and nutrition insecurity in Nigeria.</p> |   |
| <b>Keywords</b>   | Nutrition transition, International development, Colonialism, Indigenous knowledge  |
| <b>JEL Code</b>   | C55, F6, Q1, I14<br>see: <a href="http://www.aeaweb.org/jel/guide/jel.php?class=Q">www.aeaweb.org/jel/guide/jel.php?class=Q</a> ) |
| <b>Introduction</b>   | <b>100 – 250 words</b>  |
| <p>Africa has more arable land and endemic species than any other continent yet somehow still struggles with food insecurity (Council, 1996a). West Africa and Nigeria specifically have a long history of good health and productive food systems, and the pre-modern diet is one with proven health benefits (Price, 1939). For example, recent studies show that black Africans eating a traditional diet are 13 times less likely to develop colon cancer than black Americans eating a Westernized diet (O'Keefe et al., 2015). Despite this, there is a nutrition transition occurring in Africa that is rooted in the economic and environmental disruptions by European colonialism and agricultural transformation that mirrors the West's complete dependence on chemical inputs, mechanization, and monocropping of a few staple crops, at the expense of all others. Further, while indigenous African crops have been sent to the background by colonial policies and neo-colonial preferences, the knowledgebase of the indigenous populations have been sidelined, ridiculed, and marginalized, and their foods have been regarded as "foods of poverty," further contributing to the younger generation's embracement of the new Westernized system (Dweba and Mearns, 2011). Because of the established colonial foundations of negative agricultural, nutritional, and social transitions in Nigeria, this study serves as both a macro-analysis of the nutrition transition</p>  |   |

in through recent (2003-2018) country-wide data, as well as a micro-analysis of transitions in Igbo food systems in Enugu state through the words and lived experiences of those who are living through it.

## Methodology

100 – 250 words

The study relied on two sets of data: secondary and primary data, which were analyzed using descriptives analysis and natural language processing, respectively.

The primary data used focused on the role of indigenous knowledge and foods in persevering health and reducing the burden of nutrition transition through semi-structured interviews in 2021 with 54 Igbo people in the South-East of Nigeria, as well as to document a comparison between the older and younger generation's opinions and usage of traditional foods, preparation methods, and spices.

The secondary data consist of the 2003 and 2018 Nigerian Living Standard Survey (NLSS) and Demographic Health Surveys (DHS) for 2003, 2008, 2013, and 2018. The NLSS and DHS are comprehensive surveys of a diverse and large sample of Nigeria's population surveyed over the course of 12 months. The goals of the survey are 1) to provide critical information for production of a wide range of socio-economic and demographic indicators; 2) to monitor population welfare; and 3) to inform with statistical evidence to measure the impact of existing and proposed government policies. The most pertinent information to our study are obesity, noncommunicable disease burden, and food consumption. A total of 18,770 and 22,122 respondents participated in the NLSS data collection in 2003 and 2018, respectively.

## Results

100 – 250 words

The secondary NHS data analysis displayed an epidemiological transition occurring in Nigeria. From 2003 to 2018, the percentage of normal weight people decreased from 65% to 59%. Concurrently, the combined overweight and obese population increased from 21% to 27%, amounting to nearly 29% increase in the percentage of overweight and obese people in the fifteen-year period. From 2003 to 2018 the combined diabetes & hypertension burden increased from 1.9% to 2.3% over the period, comprising a noncommunicable disease growth rate of 21%. However, identifying changing NLSS food consumption trends on a national scale during the timeframe was harder to establish, as the purchasing of every food group grew between 2003 and 2018.

Primary data analysis of the interviews showed thirty-five different foods identified as being central to Igbo food systems with the top five most popular being ede (cocoyam), ji (yam), akidi (black beans), fiofio (pigeon peas), and ukwa (breadfruit). No packaged foods or ultra-processed foods or spices were considered as most important to the local food landscape or traditions. Multiple vegetables and tubers were listed as potentially having gone extinct in the area in the past few decades.

Ji (yam), the historic tuber of the Igbos, was the food most associated with affluence. Overwhelmingly, 75% of the foods that participants identified with poverty were cassava-based. The most common spices used by the older generation was reported to be ogiri and okpei (both locally fermented seeds). In contrast, the most commonly-used spice among the current generation— comprising 35% of all spices used by them— is imported ultraprocessed seasoning cubes.

There was consensus among the participants that the way people eat in Enugu State is changing. When asked to elaborate how so and in what ways, interviewees overwhelmingly indicated that they believe that diets are changing for the worst. Of the 54 people questioned, only 8% of people surveyed said that they did not believe that diets are changing, 9% did not answer, while 83% answered: yes, they are. When asked "how" they are changing, the answers had similar themes of diets transitioning away from local, whole food sources and towards ultraprocessed imports.

## Discussion and Conclusion

100 – 250 words

Based on both quantitative and qualitative data, the reality of the nutrition transition in Nigeria is apparent, with prevalent consequential diet and health changes that are rooted in colonial and neo-colonial institutions that have aimed to dismantle viable and cherished food systems in the country for the sake of creating profitable markets for themselves.

The value of what is at stake in terms of local knowledge was established through interview responses to be profound in not only its sacredness transcending generations, but its usefulness in guiding an alternative pathway from neocolonial encroachment into Nigeria's food system.

The role of indigenous knowledge and foodways promoting health is a narrative left out of most governmental, non-governmental organization (NGO), and corporation-driven initiatives in not only Nigeria, but throughout the developing world. In order to make lasting and impactful progress, this narrative needs to be empowered by governments and communities where this knowledge still exists and is cherished. Further research is needed in the field to analyze the effectiveness of implementing specific changes on a grander scale, but nonetheless the potential embedded in this knowledge is invaluable in the magnitude of resourcefulness alone.