

Abstract

The role of diet and nutritional factors in brain aging is attracting much research attention, and midlife dietary habits play a critical role in shaping cognitive health later in life. This study assessed the Influence of dietary habits and patterns on the cognitive abilities of middle-aged men aged 45–60 years in Eti-Osa Local Government Area (LGA), Lagos State, Nigeria. A descriptive cross-sectional design was adopted, and 424 respondents were selected using a multistage sampling technique. Data were collected using a validated structured questionnaire covering socio-demographics, dietary habits, and cognitive indicators. 57.9% respondents were aged 50–59 years, predominantly Yoruba (40.7%), married (68.7%), and urban residents (86.6%). While 61.2% attained tertiary education, and meal skipping was highly prevalent (78.2%), with lunch being the most skipped meal (54.7%). Diets were dominated by grains (82.8%), while nutrient-rich foods such as vegetables, nuts, dairy, and vitamin A-rich produce were rarely consumed. Alcohol intake was common (53.1%), and less than half (46.1%) engaged in regular physical activity. Cognitively, many respondents reported memory lapses and word-finding difficulties. Mean word recall scores were significantly higher among younger respondents (4.36 ± 2.23) than older ones (2.73 ± 2.16 , $p=0.000$), and among those with tertiary education (4.43 ± 2.05) compared to less educated participants (2.29 ± 1.52 , $p=0.000$). These findings indicate that limited dietary diversity, frequent meal skipping, and poor lifestyle habits contribute to early cognitive decline. Improving nutritional awareness, encouraging regular balanced meals, and promoting physical and cognitive activities are recommended to reduce cognitive impairment in midlife.

Key Words: Dietary Patterns, Cognitive Abilities, Middle-Aged Men, Cognitive Health, Diet.

Word Count: 250

Certification

This is to certify that **Ekaette Okon IDE** with matriculation number **LCU/PG/005753** carried out this research work titled “**Influence of Dietary Habits and Patterns on the Cognitive Abilities of Middle-Aged Men (44-60) in Eti-Osa LGA, Lagos State, Nigeria**” in the Department of Human Nutrition and Dietetics, Faculty of Basic Medical and Applied Sciences of Lead City University Ibadan, Oyo State, for the award of Master of Science Degree (MSc) in Human Nutrition and Dietetics.

Dr. Olanike Balogun
Supervisor

Date

Dr. Olanike Balogun
Head of Department

Date

Dedication

I dedicate this work to God Almighty, who in His infinite mercy has been my source of wisdom, knowledge, understanding and strength.

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Acknowledgement

This research was conducted at Lead City University, Ibadan, with access to the institution's central library and electronic resources. Additional relevant materials were consulted through reputable online academic databases. My appreciation goes to the people of Eti-Osa community for their support and access. I am particularly grateful to the Department of Human Nutrition and Dietetics, Lead City University, for providing the academic platform for this work. My sincere appreciation goes to my supervisor and Head of Department, Dr. O. O. Balogun, whose guidance and intellectual support shaped the quality of this research. I also acknowledge, with deep respect, the contributions of the late Dr. A. Mosuro, former Head of Department, whose academic impact remains invaluable. Special thanks also go to Dr. D. Tanimowo and other dedicated lecturers of the department for their tireless efforts in imparting knowledge and fostering a rigorous academic environment that shaped my learning experience.

On a personal note, I express heartfelt gratitude to my late mother, whose unwavering encouragement laid the foundation for my academic journey.

Even though the above-mentioned institutions and persons have assisted in the process of this research work, I alone stand responsible for the errors, if any, found in the work.

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List of Abbreviations

Abbreviation	Full Meaning
ISA	Ibadan Study of Ageing group
BPSD	Behavioral and Psychological Symptoms of Cognitive Decline
DASH	Dietary Approaches to Stop Hypertension
MIND	Mediterranean-DASH Intervention for Neurodegenerative Delay
β -OHB	Beta-Hydroxybutyrate
KD	Ketogenic Diet
MCTs	Medium-Chain Triglycerides
BBB	Blood–Brain Barrier
ROS	Reactive Oxygen Species
mPT	Mitochondrial Permeability Transition
PUFAs	Polyunsaturated Fatty Acids
LDL	Low-Density Lipoprotein
MD	Mediterranean Diet
NHS	National Health Service
BMI	Body Mass Index
CVD	Cerebrovascular Disease
TIA _s	Transient Ischemic Attacks

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