

This indicates that this population is consuming few healthy foods. Decision-makers need to design policies and programs that will improve the consumption of nutritious foods.

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P02-080-25 Evaluation of Antibiotic Residual Concentration and the Effects in Broiler Chicks

Chibuzo Carole Nweze¹, Uchenna B Alozieuwa², Hajara M Sadiq³

¹ Nasarawa State University Keffi Nigeria, Nigeria

² Veritas University Abuja Nigeria, Nigeria

³ Nasarawa State University Keffi, Nigeria

Objectives: The rise of antibiotic resistance has become a significant global health concern. This has pose serious threats to public health, agriculture and biosecurity. Often due to the misuse antibiotic leading to the emergence of resistant strains.

Methods: A 100 questionnaire survey on antibiotics usage were distributed to industrial poultry farmers in Keffi, Nigeria. Antibiotics mostly used as growth promoters and for therapeutic effects on birds were discovered. Seven of the most used antibiotics were administered for 4 weeks, were grouped into 7 of 50 chicks. each (Ao 400mg/kg; Bt 500mg/kg; Cg 330mg/kg; Dp 500mg/kg; En 220mg/kg; Fs 200mg/kg; Gf 300mg/kg. The ontrol group 8 were with no antibiotic; group 9 were purchased from poultry farms and group 10 were purchased from Open-market respectively and all animal in the group were average of 4 weeks old with 50 chicks in a group. Blood, breast, gizzard and crop samples were collected. HPTLC plate and UV lamp were used to determine the residual antibiotic concentrations. The liver, enzymes, kidney function tests and hematological parameters, antibiotic sensitivity microbial screening and tissue culture tests wee evaluated.

Results: The result showed that group 9 and 10 had adverse results with a significant difference ($p < 0.05$) in kidney, liver and hematological parametters compared to groups 1,2,3,4,5,6,7 and 8. The group 9 and 10 showed a significant difference ($p < 0.05$) with exceeding concentration of the recommended antibiotic residue limits in breast and liver samples compared to other groups. Pathogenic resistant bacteria like Salmonella spp and E.coli were found in groups 9 and 10 crop and gizzard samples.

Conclusions: The misuse of antibiotics as growth promoters and therapeutics, may affect the liver, kidney and blood of chicks, exceeds antibiotic residues limit and also contribute to the development of antibiotic resistant bacteria. This may render the chicken unsafe for human consumption.

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P02-081-25 Dietary Intake and Metabolic Syndrome of Male Heavy Smokers in Korea

Jin Myoung J Oh¹, So-Young Kim², Ji-Yeon Kim², Ji-Seon Kim², Yeol Kim², Gyung-Ah Wie²

¹ National Cancer Center, Department of Clinical Nutrition, Republic of Korea

² National Cancer Center Korea, Republic of Korea

Objectives: Smokers are known to have poor nutrient intake and low diet quality, which increases the risk of diseases. This study aimed to investigate nutrient intakes, dietary quality, and metabolic syndrome (MetS) in Korean heavy smoking men.

Methods: This study included 800 males aged 35 to 80 years with a smoking history of ≥ 20 pack-years who participated in the 5 day-residential smoking cessation program at the Korean National Cancer Center between 2021 and 2024. The participants completed anthropometric measurements, blood tests, and dietary surveys during the program. Dietary data were collected through a 24-hour dietary recall and a 20-item dietary habits assessment tool, which was conducted by trained registered dietitians. Diet quality was evaluated using the Index of Nutrient Quality (INQ), Nutrient Adequacy Ratio (NAR), and Mean Adequacy Ratio (MAR). MetS was diagnosed using modified ATP III NCEP criteria. Statistical analyses were performed using STATA (version 18.5).

Results: The mean age of participants was 57.9 ± 8.6 years and smoking history was 39.8 ± 15.6 pack-years. The BMI in younger group (< 65 years) was significantly higher than that in elderly group (≥ 65 years) ($P = 0.001$). The INQ and NAR values were low for fiber, calcium, potassium, vitamin A, vitamin B1, vitamin B2, niacin, and vitamin C. The INQ values were higher for fiber ($P < 0.0001$), calcium ($P = 0.023$), and iron ($P = 0.038$) in elderly than those in younger. The elderly consumed more breakfast ($P < 0.0001$), fruits ($P < 0.0001$), and milk ($P = 0.039$), while the younger showed less healthy habits, including higher consumption of alcohol ($P = 0.004$), high-fat meat ($P = 0.043$), fast food ($P < 0.0001$), and soft drink ($P < 0.0001$). The prevalence rate of MetS was 65.6%. Among the diagnostic criteria for MetS, elevated serum triglycerides were more prevalent in the younger compared to the elderly (65% in younger vs 55.2% in elderly, $P < 0.016$). In contrast, lower HDL cholesterol levels (42% vs 50.6%, $P < 0.039$) and elevated blood glucose (34.3% vs 43.2%, $P < 0.027$) were more prevalent in the elderly.

Conclusions: Our study showed that heavy smoking males were inadequate nutrient intake, poor diet quality, and high prevalence of MetS. Tailored nutrition education needs to be provided to heavy smoker.

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P02-082-25 Food Fraud Awareness and Perception in Nigeria

Blessing Anthonia Okonji¹, Jan A Soon-Sinclair¹

¹ University of Central Lancashire, United Kingdom

Objectives: The study's objectives was to ascertain consumers food fraud awareness and perception, and the tested hypothesis include; Ho: Null H1: There is a significant relationship between the demographic characteristics and food fraud awareness. H2: There is a significant relationship between the demographic characteristics and Are consumers responsible for

food fraud in Nigeria. H3: There is a significant relationship between the demographic characteristics and food fraud as a threat in Nigeria.

Methods: A nationwide consumer survey and interviews were conducted and the survey data were analyzed utilizing the Statistical Package for Social Science, while a thematic analytical method was employed in analyzing the interview data.

Results: The study findings revealed that over 50% of the 527 participants were educated consumers who tend to purchase food product 1- 2 times a week and prepares food daily. Although 46.5% of the participants were aware of food fraud, 38.1% were unaware and 15.4% were unsure. Hypothesis 1 and 3, were accepted with a significant association between education $X^2(8)= 51.81$ ($p < 0.001$), employment $X^2(6)= 13.492$ ($p < 0.036$), and food fraud awareness (with 50% unaware consumers). In addition, a significant association was indicated between gender $X^2(6)= 27.976$ ($p < 0.01$), age $X^2(12)= 21.356$ ($p < 0.045$), and Is food fraud a threat in Nigeria. Furthermore, the consumers interviews findings showed a corresponding perception as financial benefits and the ease to commit food fraud were identified as the reasons for food fraud in Nigeria. Adulteration was indicated as the major type of food fraud act, with food packaging, and manufacturing as the most vulnerable food supply chain. Key vulnerable food products identified include alcoholic beverages, herbs and spices as well as fat and oils.

Conclusions: Food fraud activities in Nigeria is a significant concern to the consumers, although the findings indicate that while some consumers are aware of food fraud, others are ignorant and victimized. Consequently, impacting on the consumers health, nutritional values, beliefs and trust. The study calls for collaborative efforts from the regulatory bodies, healthcare professionals, and the government to combat food fraud.

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P02-083-25 Food Insecurity and Free Food Resource Utilization: Experiences of International Students at a Midwestern University

Harriet Okronipa¹, Taylor Allen¹, Madisyn Myers¹, Kwadwo Kumi¹, Deana Hildebrand¹, Diana Romano¹, Isaac Agbemafle²

¹ Oklahoma State University, United States

² University of Rhode Island, United States

Objectives: Food insecurity is a growing concern on university campuses, especially among international students. While universities have implemented free food resources to address this issue, little is known about how these resources are utilized, particularly by international students. We examined the prevalence of food insecurity among international students attending Oklahoma State University (OSU) and their utilization of free food resources.

Methods: We conducted a cross-sectional online survey in February 2024 among international students recruited via their university emails. Participants responded to questions about food insecurity experiences, coping strategies and awareness and utilization of free food resources. Food insecurity was assessed using the 6-item United States Department of Agriculture food

insecurity Six-item Short Form. Simple and multiple logistic regressions were performed to identify factors significantly associated with the non-utilization of free food resources.

Results: Participants ($n=173$) had a mean age of 28.7 ± 8.4 years; the majority were male (55.2%), graduate students (92.3%), single (68.3%) and employed part-time (63.6%). Most did not receive financial aid (65%) and lived off campus (65.2%). The prevalence of food insecurity was 45.7%, including 31.2% experiencing low food security and 14.5% very low food security. To cope with limited food resources, most international students reported strategies such as reducing meal sizes (73.9%), eating less healthy meals (66.9%), and purchasing cheap, processed foods (66.3%). While 91.5% of participants were aware of at least one free food resource program, only 78.7% reported utilizing at least one program. Non-utilization was more likely among undergraduate students (AOR 6.7, 95% CI 1.49, 30.7) and those lacking awareness (AOR 12.9, 95% CI 3.4, 49.2).

Conclusions: A large percentage of international students struggle with food insecurity. While they are aware of free food resource programs available on the OSU campus or within the Stillwater community, their utilization remains sub-optimal. Understanding the barriers to use of these programs will inform future interventions to improve the use of these resources, thereby improving food security among this population.

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P02-084-25 Impact of Formulated Jam on Blood Glucose Levels and Sensory Perception in Pre-Diabetic Adults

Nkeiruka Oly-Alawuba¹, Maryann Ibe-Omogbemi¹

¹ Imo State University Owerri, Nigeria

Objectives: The study investigates the sensory profile and blood glucose levels of jam formulations created from composite ratios of zobo extract (*Hibiscus sabdariffa*), Gorontula (*azanza garckeana*) beetroot (*beta vulgaris*), African star apple (*chrysophyllum albidum*) and lemon (*Citrus x limon*) in relation to a popular conventional jam sold in the market.

Methods: Two kilograms of zobo calyces were sorted, washed, and boiled to produce a clear liquid extract, while one kilogram each of fresh beetroot and gorontula were processed into pulp after washing and soaking. The African star apple was prepared by drying and grinding its peel into pectin, and its mesocarp was boiled to extract additional pectin. Pectin was also extracted from half a kilogram of unripe lemon through a similar process. Finally, three composite jam samples (A,B,C) were formulated using these ingredients, with a conventional jam product (Sample D) serving as the control. A panel of twenty undergraduate students evaluated jam samples based on six sensory attributes using a 9-point hedonic scale. s.

Results: Proximate result showed that sample B had 19.72% moisture Crude fibre of the jam samples were significantly different ($p \leq 0.05$) carbohydrate results were low (C=33.96%, B= 41.19%, A=42.46% and D 45.03%) thus, making the products a low-calorie value product. Sodium of the samples was significantly different ($p \leq 0.05$). Ranged from 16.24 mg/100g for sample C to 25.90 mg/100g for sample D. Magnesium was