



Solar Cookers and Food Security in Northern Nigerian Villages: A Qualitative Study

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Abstract

Solar cookers have gained traction as a sustainable alternative to traditional cooking methods in developing regions, particularly focusing on food security in rural areas where access to electricity and fuel is limited. The study employed a qualitative research approach with semi-structured interviews and focus group discussions among 30 households selected from two Northern Nigerian villages. Data collection was conducted over four months, focusing on pre-existing social structures and cultural practices related to food preparation and energy use. Solar cooker adoption in the studied villages ranged from 25% in village A to 40% in village B, with significant variations attributed to socio-economic factors such as income levels and access to information. Participants reported a notable reduction in wood fuel consumption by up to 70%, leading to improved environmental sustainability. The findings suggest that solar cookers can be effective tools for enhancing food security in Northern Nigerian villages, particularly among households with lower incomes who face challenges accessing traditional cooking fuels. However, higher adoption rates were observed where there was greater community engagement and education about the benefits of solar cookers. Policy makers should consider promoting awareness campaigns to highlight the environmental and health benefits of using solar cookers in Northern Nigerian villages, while also addressing infrastructure needs such as installation support for households with limited access to electricity. Solar Cookers, Food Security, Nigeria, Qualitative Study

Keywords: *Nigerian, Qualitative, Anthropology, Sustainability, Food Security, Ethnography, Development Studies*

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