

2025 UDP Scholarship Recipient

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Research

As a doctoral candidate working under the supervision of Dr. Maggie Clark, I focus on a major source of air pollution globally. Household air pollution (HAP), which results from the combustion of inefficient household energy sources is a key driver of morbidity and mortality globally. The burden of HAP is highest in low and middle-income countries (LMICs). In these contexts, where HAP exposure is high and cardiometabolic disease rates

are rising, limited research has examined the impact of HAP on disease risk, particularly in rural settings. The few studies that have investigated these relationships show inconsistent findings. Therefore, given the sparsity and inconsistency in the present body of evidence on this subject, my dissertation aims were designed to utilize robust study designs to address this critical knowledge gap.

My dissertation aims to provide evidence on how HAP interventions and their related exposure affect cardiometabolic disease risk across different demographic profiles and low-resource settings. These will be instrumental in advancing public health policies by aiding policymakers, public health financiers, and global health organizations in designing multi-faceted intervention strategies. These findings can be leveraged to advocate for large-scale transitions to cleaner cooking and lighting solutions, guiding investments in sustainable energy programs to alleviate the health burden of HAP exposure in LMICs.

Biography

I am a first-generation student and doctoral candidate in the Environmental Health (Epidemiology Specialization) program within the Environmental and Radiological Health Sciences Department. Growing up in a rural fishing community in Ghana, where biomass fuel was the primary energy source for fish preservation, I witnessed firsthand the detrimental health effects of air pollution. These formative experiences fueled my passion for environmental health research.

My strong interest in environmental health was nurtured during my undergraduate studies in Biomedical Sciences at the University of Cape Coast, where I worked under the mentorship of Professor Kofi Amegah. There, I participated in various projects that highlighted the burden of air pollution in Ghana and its health effects on vulnerable populations. I further expanded my public health knowledge by earning a Master of Public Health degree from the Central University of Kerala in India.

Currently, under the guidance of Professor Maggie Clark, I am pursuing my goal of becoming a resourceful environmental epidemiologist who integrates research, policy advocacy, and public health initiatives to drive meaningful change. My doctoral dissertation focuses on household air pollution—a globally important exposure affecting nearly one-third of the world's population — and its effects on health in low-resource settings.

Looking ahead, I remain deeply committed to building a career at the intersection of research, education, and policy. My long-term goal is to bridge the gap between research and actionable policy to ensure that scientific findings translate into sustainable public health solutions. I aspire to lead both global and domestic initiatives aimed at mitigating environmental health risks, especially in underserved communities around the world.