Household cross-sectional survey on chicken meat preparation hazard, kap, and use of nofa in rwanda

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Abstract

Introduction:

Rwanda, the most densely populated country in Africa, faces significant food security challenges, and poultry is a key sector for development due to its efficiency and rapid growth potential (Shapiro et al., 2017). However, the sector remains underdeveloped, lacking essential slaughter and processing facilities, which increases the risk of foodborne diseases. Key pathogens of concern include toxigenic Escherichia coli, *Salmonella spp.*, and *Staphylococcus aureus* (Abebe et al., 2020). The household level, a critical point in the farm-to-fork chain, has been neglected in food safety research in Rwanda, despite contaminated meat representing a significant risk factor for the transmission of foodborne pathogens and antibiotic-resistant pathogenic bacteria (Grudlewska-Buda et al., 2023). Understanding the assessment of food safety knowledge, attitudes, and practices (KAP) is essential for identifying gaps in food safety and implementing effective food safety protocols.

Purpose:

This study aims to assess KAP and evaluate the risk associated with meat consumption in Kigali city with a focus on the potential of natural food additives for risk mitigation.

Methodology:

Ethical approval was obtained, and a structured questionnaire was developed, pre-tested, and administered using ODK. Between June and September 2024, 270 survey questionnaire data were collected from people responsible for meat purchasing and preparation within middle-class income households in three districts of Kigali City. The survey data were analysed using R software to identify key variables and trends.

Result:

We present results on quantity, frequency, source, and type of chicken consumption. Risk amplifying and mitigating practices are presented, including washing, use of cutting boards, and personal hygiene. There was widespread use of natural food additives, including garlic, ginger, pepper, and brine. Knowledge of food safety was assessed, and relations between knowledge and practice were explored.

Significance: The study's outcomes, including a detailed KAP analysis, provide critical insights into current food safety practices, knowledge gaps, and attitudes. They suggest natural food additives are a promising approach to improving food safety in urban Kigali.

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These findings will inform the development of targeted public health interventions to improve food safety and reduce the risk of foodborne diseases in Rwanda.