

Food Safety Knowledge, Attitudes, and Practices among Food Handlers in Institutional Kitchens

Altansarnai Batbayar *

Department of Nutrition and Public Health, Mongolian University of Medical Sciences, Ulaanbaatar, Mongolia

DESCRIPTION

Institutional kitchens, such as those in schools, hospitals, universities, and government facilities, are critical in delivering large volumes of meals daily and therefore play a major role in public food safety. Ensuring hygienic food preparation practices in these settings is essential to prevent foodborne illnesses, which can lead to serious health and economic consequences. This study investigates the current status of food safety Knowledge, Attitudes and Practices (KAP) among food handlers in institutional kitchens across Ulaanbaatar, Mongolia. Despite global advancements in food safety education, many institutional kitchens in developing regions still face challenges related to poor infrastructure, lack of formal training, and limited regulatory enforcement. In Mongolia, where seasonal extremes and logistical constraints complicate food storage and transport, institutional food service requires particular attention to food hygiene.

The cross-sectional study included 150 food handlers from 25 different institutional kitchens including public schools, hospitals, university canteens, and government cafeterias. A structured questionnaire, adapted from WHO's Five Keys to Safer Food and localized for cultural relevance, was administered to assess participants' knowledge on foodborne pathogens, cross-contamination, temperature control, personal hygiene, and cleaning practices. Additionally, observational checklists and interviews were conducted to assess actual practices and to cross-verify self-reported responses. Variables such as education level, years of experience, and prior training were also analyzed in relation to food safety performance.

Findings revealed a mixed level of knowledge and significant gaps between knowledge and practice. While 76% of the respondents correctly identified Salmonella and E. coli as common foodborne pathogens, only 41% knew the correct internal cooking temperature for meat. Similarly, although over 85% acknowledged that improper food storage could lead to spoilage, fewer than 50% consistently applied proper refrigeration practices. In terms of attitudes, the majority of respondents (89%)

expressed a willingness to follow food safety guidelines, and many believed that their role was essential in ensuring the health of food consumers. However, the actual implementation of good hygiene practices was inconsistent. Observational data showed that only 38% of food handlers wore gloves while preparing meals, and just 24% followed proper handwashing techniques with soap after handling raw ingredients.

One concerning observation was the lack of knowledge and implementation related to cross-contamination prevention. Cutting boards and knives were often reused between raw and cooked foods without adequate sanitization, particularly in school and hospital kitchens. In several kitchens, cleaning schedules were either not documented or not followed systematically. Personal hygiene practices were also found to be suboptimal, with only 30% of the staff wearing hairnets, and an even smaller proportion using face masks during food preparation. While many handlers were aware of hygiene principles in theory, resource limitations and high workloads often interfered with good practice. Furthermore, 64% of the surveyed individuals had not received any formal food safety training in the last two years, and several reported learning "on the job" without structured instruction.

Interestingly, those with more than five years of experience and those who had received formal food safety training scored significantly higher in both knowledge and observed practice. This highlights the importance of continuous education and periodic refresher courses. Many of the handlers expressed interest in receiving more guidance and reported that visual materials and practical demonstrations would help them understand food safety procedures better than written manuals. Some institutions, particularly hospitals, were better equipped and followed stricter protocols, while others, especially in public schools, lacked adequate cold storage and sanitation infrastructure.

The study also explored the institutional policies in place regarding food safety. Only 36% of the kitchens had a designated food safety officer or hygiene supervisor. Regular internal audits

Correspondence to: Department of Nutrition and Public Health, Mongolian University of Medical Sciences, Ulaanbaatar, Mongolia, E-mail: altansarnai.b@mums-mn.org

Received: 03-Jan-2025, Manuscript No. JFMSH-25-37786; **Editor assigned:** 06-Jan-2025, PreQC No. JFMSH-25-37786 (PQ); **Reviewed:** 20-Jan-2025, QC No. JFMSH-25-37786; **Revised:** 27-Jan-2025, Manuscript No. JFMSH-25-37786 (R); **Published:** 03-Feb-2025. DOI: 10.35841/2476-2059.25.10.337.

Citation: Batbayar A (2025). Food Safety Knowledge, Attitudes, and Practices among Food Handlers in Institutional Kitchens. J Food Microbiol Saf Hyg.10:337.

Copyright: © 2025 Batbayar A. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

were rare, and external inspections were infrequent due to limited staffing in regulatory agencies. The lack of a standardized monitoring system further exacerbates the risk of lapses in hygiene, especially during peak operational hours when food is prepared and served in large volumes.

In conclusion, this study reveals a critical need to improve food safety knowledge and practices among food handlers in institutional kitchens in Mongolia. While awareness levels are moderately high, gaps in practical implementation and infrastructure continue to pose significant risks to food safety. Addressing these issues requires a multi-faceted approach,

including structured training programs, investment in kitchen hygiene infrastructure, regular supervision, and policy-level support. Encouraging a culture of food safety through continuous education and accountability mechanisms will help protect public health, especially in settings that cater to vulnerable populations. The findings underscore the importance of integrating food safety into the national public health agenda and ensuring that institutional food handlers are equipped, motivated and empowered to deliver meals that are not only nutritious but also safe.