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Knowledge and practices of chicken egg handling among food handlers from families of KIU undergraduate students

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Background: Among the foodborne illnesses, salmonellosis accounts for a majority of outbreaks linked to raw/unprocessed chicken eggs. Improper practices at domestic kitchen, cross-contamination due to improper food handling may lead to food poisoning. Knowledge of egg handling practices during purchase, storage, and preparation of eggs in Sri Lanka is still limited and no accurate data about the consumer phase of the food chain.

Objective: This survey aimed to evaluate knowledge and practices among Sri Lankan egg consumers, and risk perceptions associated with domestic egg handling.

Method: The participants were food handlers from families of KIU undergraduate students. A self-administrated online questionnaire was sent and 298 participants were enrolled through purposive sampling. The questionnaire consisted of socio-demographic data, egg handling practices, and knowledge of egg handling/food poisoning. Data was analyzed using IBM SPSS version 25.0.

Results: The majority of the participants were 51-61 years old. Of the respondents, 80.5% were females and 81.0% of participants had completed tertiary education. 41.9% of participants preferred to choose non-packed eggs and 40.9% consumed half-boiled and 4.4% raw eggs. The majority (79.9 %) cleaned the egg surface with tap water before cooking. 68.4 % of respondents stored eggs in the refrigerator (2-8 °C) for less than one week. Only 20.8 % were aware that consumption of contaminated eggs can cause salmonellosis while 33.2% participants knew pathogenic organisms can be found in both egg yolk and egg white. Of the respondents, 40.3 % had a good knowledge of transmission and spread of foodborne diseases.

Conclusion: The majority of the respondents handled eggs without scientific knowledge on correct handling of eggs. Less than 34% were aware of the risk of acquiring salmonellosis through the consumption of eggs. There is a need to increase the knowledge of food safety and correct handling practices among the egg consumer population.