# **Titre d’article**: Serotype diversity and slaughterhouse-level risk factors related to Salmonella contamination on poultry carcasses in Algiers

**Abstract :**

Introduction: In Algeria, the latest studies on Salmonella demonstrated warning contamination rates in farms and slaughterhouses. This pathogen can contaminate poultry meat and put humans at risk especially that such product is nowadays widely consumed. Methodology: a cross-sectional study was conducted in Algiers to evaluate prevalence, determine serotypes and quantify risk for Salmonella contamination in broiler chickens and turkeys at the post-chill stage of slaughter process. Results: batch prevalence was 63.1% for chickens and 34.9% for turkeys. Eleven serotypes were isolated from chickens and five from turkeys. The most predominant at both sample and batch levels was S. Kentucky either in chicken (65.1%) or in turkey carcasses (63.2%). Univariate analysis screened 3 variables for chickens and 5 variables for turkeys. Final multivariate regression models provided one potential risk factor for Salmonella contamination in each poultry species. Presence of less than 6 broilers simultaneously in the traditional scalding tank of small scale slaughterhouses had a significantly reduced contamination risk (OR=0.31; p<0.05). Slaughtering turkeys in sites processing only this specie than in mixed poultry slaughterhouses increased significantly the contamination probability (OR = 4.44; p <0.05). Conclusions: Our study indicates a high prevalence of Salmonella-contaminated poultry carcass with wide diversity of serotypes. Moreover, two potential risk factors identified for the first time in Algeria are found to be associated with the lack in hygienic management on production sites. A real threat for consumers exists highlighting the imperative need for improved safety throughout the local poultry meat supply chain.