

**Title:** A systematic review and meta-regression of older consumers' food safety knowledge and behaviours in the home setting

**Authors:** Abhinand Thaivalappil<sup>1</sup> (presenter), Ian Young<sup>2</sup>, Charles Paco<sup>3</sup>, Apiramy Jeyapalan<sup>1</sup>, and Andrew Papadopoulos<sup>1</sup>

<sup>1</sup>University of Guelph, Guelph, Canada

<sup>2</sup>Ryerson University, Toronto, Canada

<sup>3</sup>Queen's University, Kingston, Canada

**Introduction:** In 2017, seniors were estimated to have outnumbered children in Canada. Canada is considered an aging population, and the number of seniors is predicted to increase up to 25% of the nation's total population within the next 20 years. Older adults are considered a high-risk population for foodborne illness because they have unique food handling practices, weakened immune systems, and greater likelihood of complications (e.g. hospitalization, death) resulting from food poisoning.

**Methods:** A systematic review was undertaken to identify, characterize, and synthesize the published research on the knowledge, attitudes, and practices of older adults (60+) toward food handling in the domestic setting. The review consisted of a comprehensive search strategy, relevance screening, and article characterization, data extraction, and meta-analysis to synthesize all available studies in this area to determine (a) the prevalence of safe food handling knowledge, behaviours, and high-risk food consumption practices among the elderly living independently; and (b) the study-level factors affecting the difference in prevalence of these outcomes across studies.

**Results:** A total of 57 relevant studies were identified published from 1996-2018. Most studies used a cross-sectional design (86%), were conducted in the United States (58%), and contained self-reported food safety practices (77%). Results from the meta-analysis will include prevalence of knowledge, safe food handling practices, and food consumption behaviours of independent-living elderly.

**Implications:** The results will aim to identify key knowledge and practice gaps to provide recommendations for the improvement of future education programs in this population.