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Examination of Seafood Intake Using Online 24hr Recall Tool for Use in Risk Assessment Analysis

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Abstract

Introduction: Healthy eating recommendations advise eating two portions of fish per week. Although seafood consumption has doubled globally over the last 50 years there is currently very little data on seafood consumption in Ireland. It is important to know what is being consumed by a population for nutritional and food safety purposes. The aim of this study is to collect reported dietary intake data from Irish seafood consumers, using an online dietary intake assessment tool, to determine habitual intakes of seafood for use in risk assessment.

Materials and Methods: Foodbook24 is a self-administered, online 24hr recall tool developed for the purpose of nutritional surveillance in Ireland. For the purpose of this study it was further developed to include a detailed list of seafood regularly consumed in Ireland. Foods were selected using established food databases (Languel, FoodEx2 and BIM Seafood Handbook). Food composition was determined using McCance and Widdowson (7th Ed.) and portion sizes were based on NANS, published portion size books and recipes. Participants will be recruited using commonly used approaches; radio adverts & face-to-face recruitment. Seafood consumers (n = 1000), balanced for gender, age and urban/rural location, will be targeted. Participants will complete 2×24hr recalls, over 2 weeks, and complete an accompanying food frequency questionnaire. Demographic and lifestyle data will also be collected.

Results: In the development of the tool, a total of 246 foods were added to Foodbook24, including 38 species of fish, with approximately 2–25 fish dishes for each fish. The composition of 156 foods were a direct match to McCance and Widdowson, 36 were similar and 24 used a combination of foods. For fish meals and recipes, 17 meals had a direct match in McCance and Widdowson and 10 were obtained using the average of 3 recipes. Foodbook24 contained a large proportion (92%) of the relevant portion sizes, others came from relevant books and recipes.

Discussion: Data collection is currently ongoing, but it is expected that the study will represent a significant step forward in public health policy contribution by characterising the likelihood of illness within a population on an annual basis. Furthermore, it will demonstrate the use of novel intake assessment technologies for fast and cost-effective collection of data for risk assessment purposes, reducing the time and cost required for data collection.

Conflict of Interest

There is no conflict of interest.