

Nutritional and Environmental Evaluation of Canteen Menus in Institutional Catering Systems

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State of the Art



Increase in Institutional Food Consumption: Significant rise in meals consumed at canteens worldwide, leading to nutritional challenges



Diet-Related Health Risks: Poor diets contribute to millions of deaths and DALYs. High sodium, low whole grains, and low fruit intake are major global risks



Catering Sector Impact: €25 billion industry with 6 billion meals served annually in Europe, influencing nutritional quality and environmental impact of total dietary pattern



Limited understanding of the nutritional and environmental impact of canteen menus, thus, comprehensive menu analysis is essential



Optimized Sustainable Diet: Increased plant-based foods and reduced animal-based foods, with nutritional evaluation of Plant-Based Alternatives (PBAs) due to rising interest and their consideration in optimized diets

Aim of PhD Project

To examine and improve the catering system menus nutritionally and environmentally, to explore the viability of PBAs as part of an optimized sustainable diet, and to conduct interventional studies to investigate diet's implementation and effectiveness in real-life settings

Objectives and Milestones

- 1) Map existing literature** → to evaluate the gaps in the global institutional catering system to promote intervention possibilities (with focus on Italian system)
- 2) Analyse nutritional quality (NQ) and environmental impact (EI) of menus provided by catering system + optimization** → to characterize current nutritional and environmental effects, and to identify an optimized dietary solution that is sustainable, healthy, and tailored to the Italian population
- 3) Investigate NQ and EI of substituting animal-derived foods with PBA in canteen menus + potential role of PBA products in optimized diet**
- 4) Develop and manage intervention studies** → to assess acceptability, adoption, actual food intake, food waste, and eating behavior
- 5) Write, edit, and disseminate results**

PhD Project Gant Diagram

Activity Months	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1) Scoping Review																								
1) Finalize results																								
2) Publish Review																								
2) Analysis of Menus and Optimization																								
1) NQ and EI analysis of menus																								
2) Optimize of menus using cultural, nutritional, and environmental constraints																								
3) Investigation of PBA																								
1) Nutritional and environmental analysis of PBA																								
2) Investigate of potential role in proposed optimized diet																								
4) Development of Intervention Studies																								
1) Finalizing methodologies and settings of RCT																								
2) RCT Execution																								
5) Thesis and Paper Preparation																								

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