

# Time to cook! Developing a conceptual framework to guide healthy eating education in time-scarce lifestyles

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## ABSTRACT

**Background:**  
Time is often indicated as a main barrier to cooking from scratch and to healthy eating. This has implications for health outcomes and nutrition education.

**Objective:**  
This study reviewed existing literature on the perception of time as a barrier to home cooking, the time link with cooking skills and practices, and inclusion of time in food, nutrition and cooking education in different settings and through different media. The goal was to generate a conceptual framework to help inform healthy eating education considering time-scarce lifestyles.

**Study Design:**  
A narrative literature review was conducted, involving searches in Pub Med and Google Scholar, using the keywords time, food preparation, cooking and health, and by consulting other grey literature. Years covered were 2010-2020.

**Analysis:**  
102 studies were reviewed and thematic analysis was used to elicit main time-related factors which directly or indirectly were involved in food choices, preparation and consumption, and food, nutrition and cooking skills education.

**Results:**  
Key emergent themes included general time scarcity and consumption of low nutritive quality food (e.g. eating more highly processed, nutrient-poor foods through using convenience foods or eating fast food meals); duration of food preparation and consumption of specific foods (e.g. vegetables, fruit, cholesterol-rich foods); diversity of vehicles to successfully promote and aid home cooking efficiency (e.g. community courses, TV programmes, mobile apps, video messaging); culinary nutrition education for health professionals to help patients overcome time barriers to healthier eating; creative healthy snack and meal inspiration; and practical skills to plan and prepare healthy meals ahead of time

**Conclusions:**  
A conceptual framework based on evidence from the literature shows how time availability and usage have implications for diet quality, and how time can be addressed in education for healthy eating. Further research could test the conceptual framework in aiding development of practical nutrition education to suit contemporary time-scarce lifestyles.

## BACKGROUND

Various countries around the world have seen a decline in home cooking with time constraints being forwarded by individuals of different ages and life stages as one of the main reasons. This decrease is manifested in different ways, ranging from an overall reduction in home-prepared meals, to greater use of convenience foods, including highly processed ingredients and partially- or ready-prepared meals. Time constraints are often explained as an outcome of increased hours in paid employment, or a lack of income to 'buy time' by paying for home help or child care. With respect to food preparation, time constraints are sometimes exacerbated by lack of cooking skills and meal ideas, perceived lack of self efficacy, unwillingness to make an effort, and a lack of support from other family members, amongst others. Studies have shown that frequent home cooking in general, and of healthy meals in particular, can improve diet quality and reduce the risk of various chronic diseases. As a result, different interventions have sought to offer training in healthy meal planning and cooking skills to specific target audiences, in diverse settings and using different approaches and media.

## OBJECTIVE

The aim of this study was to review existing literature and delve deeper into perceptions of time as a barrier to home cooking, the relationships between time and cooking skills and practices and related outcomes, and how time is addressed in food, nutrition and cooking educational initiatives. The goal was to generate a conceptual framework to help inform healthy eating education for different learners keeping in mind the perceived or actual barrier of time scarcity in contemporary Western-style lifestyles.

## STUDY DESIGN

The study adopted a narrative literature review approach. This was deemed as appropriate for exploration of current knowledge on the phenomenon of concern, and given that scope was of greater interest than precise magnitude of factors involved. In January 2020 searches were conducted in Pub Med and Google Scholar, using the terms *time*, *food preparation*, *cooking and health*, and other grey literature was also consulted. Years covered were 2010-2020. Lists of publications generated were sifted so that duplicates and articles referring to very similar aspects of the same study were removed.



Figure 1. Search terms used.

## ANALYSIS

102 studies were reviewed through reading their abstracts or the full publication when there was extensive coverage of issues of interest. Annotations were made and a manual thematic analysis was conducted to elicit the main time-related factors which directly or indirectly were involved in food choice, preparation and consumption, and food, nutrition and cooking skills education.

## RESULTS

Multiple themes emerged which were grouped under five key themes as follows:

- general time scarcity and association with consumption of food of low nutritive value (e.g. highly-processed ready-prepared meals);
- duration of food preparation and association with consumption of specific foods (e.g. vegetables, fruit, cholesterol-rich foods);
- diversity of educational strategies to successfully promote and aid home cooking efficiency directly or through intermediaries;
- creative and motivational inspiration for healthy snack and meal production based on personal attitudes to cooking;
- practical skills to plan and prepare healthy meals for future or immediate consumption.

These themes often manifested themselves differently depending primarily on the age, gender, ethnicity, and parental, employment, health or financial status of the individuals involved, as well as personal priorities, social norms and contexts. The educational interventions often addressed time constraints alongside other barriers to home cooking, acknowledging the complexity of the related behaviours and inter-related influencing factors.

The conceptual framework designed aimed to integrate these themes to guide educational planning. This framework is of a preliminary nature and will be further refined as the salient themes are revisited in order to better study the interlinkages.

## CONCLUSIONS

Time usage for home cooking has implications for dietary outcomes, health and quality of life. The role of time in different stages of meal planning and preparation has diverse meanings for individuals and is thus also managed differently. Some aspects of time are already addressed effectively in education for healthy eating. The conceptual framework presented aims to build on what already works well. Future research could test the refined framework to assess its potential for developing targeted, acceptable and practical nutrition education for healthy home cooking in current time-scarce lifestyles.

### Content Focus: Healthy food resource management

- Prioritising cooking more healthily, not just cooking more frequently at home
- Appreciating benefits of healthy home cooking: diet, cultural identity and preservation, self satisfaction, pleasing others, family quality time
- Overcoming obstacles limiting daily home preparation of food: lack of time, energy, interest, ideas, valuation and planning; picky eaters
- Planning ahead: recipes and menus for dishes which are quick to make, have simple ingredients, involve a few steps, require minimal usage of equipment and cleaning up during and after making
- Collecting simple healthy recipes for different meal occasions: using the internet as one quick source
- Making minor recipe modifications to improve nutritive/health value
- Incorporating convenience / partly-cooked foods whilst maintaining nutritive value
- Batch cooking and freezing to facilitate cooking from scratch
- Addressing time-saving in food choices and actions in 'fields of practice': the shop, market, home, kitchen, refrigerator, cupboards

### Format Choice: Diverse and targeted approaches

- Fostering goal-setting for healthy home cooking: personalised, meaningful, attainable goals
- Including peer-teaching and peer discussion
- Demonstrating basic cooking skills combined with nutrition education
- Providing for varied experiential cooking opportunities
- Utilising short videos, mobile applications; going 'live'/real time
- Utilising open online learning platforms (MOOC) for free flexible access
- Showing visually appealing foods in authentic, typical settings of target audience
- Organising for parent-child dyads, family members, friends or schoolmates to cook together
- Organising for the novice cook and expert chef approach

### Audience Profile Targeting

- Addressing families' need to incorporate meal planning, food shopping and cooking as part of their overall household routines
- Addressing working parents' lack of energy but desire to please children/family when cooking
- Addressing parents' valuation of allowing children to participate in cooking and their simultaneous fear of 'the mess' created
- Addressing adolescents' preference for peer-focused learning and incentives
- Addressing low-income families' and college students' need for quick, healthy and low-cost meals
- Addressing elderly persons' trajectory stage: those seeking information as cooking interest is increasing vs. those whose cooking interest is waning
- Catering for health professionals' need for practical cooking training to enhance lifestyle counselling for patients/ clients
- Catering for working adults' need for flexible access to education that also incorporates self-learning

Figure 2. The Home Cooking in Time-Scarce Lifestyles Conceptual Framework for Healthy Eating Education.