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## City St George's, University of London

**Citation:** Caraher, M. (2014). Cooking crisis: What crisis?. The IFAVA Scientific Newsletter(86 Feb), p. 4.

This is the published version of the paper.

This version of the publication may differ from the final published version. To cite this item please consult the publisher's version.

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« *Cooking skills: a tool for a healthy diet* »

## Editorial

Cooking and chefs have never been more popular. Both are making headlines in magazines, television and the internet. They are everywhere and chefs are starting to become real superstars!!!

The message given is that we should take pleasure in cooking every day, and therefore chefs face a greater challenge.

Education in healthy eating!

In earlier times, transmission of cooking skills was a family affair, mostly concerning women. Today is a very different story. Intense pace, little or no time devoted to preparing family meals, demons of food that is “ready made”, or “ready to cook”. These pressures occur at a time we know that a balanced healthy diet is key to well being. The proof is in rising rates of obesity, cardiovascular disease as well as many other health concerns.

Like our grandmothers before, chefs are now playing a leading role in educating people about balanced and healthy eating. This is an enormous challenge!

When are we going to see children playing the leading role in school cafeterias?

They have to relearn the obvious: to eat fresh fruits and vegetables, to vary and diversify foods, right from a very early age. When will we see cooking classes in elementary schools? We could then teach children good habits right from the start. Children would then be in a position to be the best teachers for their parents.

Culinary education should integrate all modern media (internet, videos...). Our favorite chefs must also replace our grandmothers and visit elementary, middle and high schools, as well as universities to remind us of the basics.

Cooking skills, a source of pleasure, love of good food and sharing is a real motivation for healthy eating.

Much work remains...

**Charles Soussin**

Cooking teacher & culinary consultant, France



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# The importance of cooking skills for balanced food choices

## Results from the Swiss Food Panel

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Food guidelines simply inform people about healthy food choices and good eating practices, and a translation of food guidelines into actual daily meal preparation needs more than nutrition knowledge alone. Other important aspects that affect food choices are household characteristics, such as financial resources, available means of transportation, kitchen equipment, and household members' skills in food acquisition, transportation, storage, and preparation<sup>1</sup>. Based on the published literature, however, it remains unclear how cooking skills influence one's dietary behaviour. Therefore, we designed a cooking skills scale to measure cooking skills in a European adult population. Furthermore, we examined which factors predict cooking skills, and investigated if there is an association between cooking skills and balanced food choices. Our study is based on data from the Swiss Food Panel, a population-based longitudinal study of the eating behaviour of the Swiss population (4,436 participants). All participants receive a written questionnaire every year and provide information about different aspects of their eating behaviour.

### Men reported lower cooking skills than women

In general, men reported lower cooking skills than women in every age group, and particularly older men's cooking skills are low. One explanation might be that cooking classes for females were obligatory in the earlier years in Switzerland, while obligatory cooking classes for males started only in the 1980s. Further analysis showed that younger women at the ages of 20 to 30 years reported lower cooking skills, than older women. The supposed decline in the intergenerational transmission of basic cooking skills at home<sup>2</sup>, and people's increasing consumption of convenience food<sup>3</sup> might have led to the fact that cooking skills become less frequently practiced.

### Cooking enjoyment is the most important predictor for cooking skills

Women who enjoy cooking have higher cooking skills independently of time or effort considerations. Interestingly, the association between cooking skills and cooking enjoyment is more pronounced in males than in females. Men's motivation to cook might be different from women's, because men cook when they are in the right mood and cooking is more constructed as a fun activity, than as an everyday responsibility. Another important factor for cooking skills is the presence of children. If there are children under the age of 16 years in the household, men and women are more likely to be able to cook. Parents might be more motivated to learn

cooking and cook more frequently than persons living alone.

### People who are able to cook make better food choices

We also assessed food choices by using a Food-Frequency Questionnaire, which reflects usual consumption of various food groups. Our results suggest there is a positive relationship between cooking skills and the consumption of vegetables. Accordingly, the higher the cooking skills are, the higher is the vegetable consumption. In fact, cooking skills enable the preparation of different food items and dishes, and therefore may increase food choice opportunities, as well as food variety. It is well known that food variety is one factor among others that may increase food intake, which is preferable in the case of vegetables consumption<sup>4,5</sup>. Moreover, people with high cooking skills less frequently consume convenience food (e.g. pizza, a meal in a can, meals ready-to eat), sweets (e.g. chocolate, sweet pastries) and savoury snacks (e.g. chips) as well as sugar-sweetened beverages (e.g. Fanta, Cola). Most of those food items do not need preparation skills or additional effort in advance, are comfortable and simplify meal preparation. Unfortunately, most of these products are high in calories due to high sugar and fat contents, and with a higher consumption of these products, consumers lose control over ingredients and food safety.

### Cooking classes in school and healthy convenience food

Our results have further strengthened the hypothesis that people's food choices are influenced by their cooking skills. Therefore, promotion of cooking skills should be part of prevention strategies. Cooking classes in schools provide a great opportunity to raise awareness of fresh foods, food ingredients, and health-promoting diets. These classes could also provide students with the skills on how to economically and quickly prepare healthy dishes. Additionally, children and young adults, especially from low-income families, might benefit most from cooking classes in schools because they have limited access to other resources of information. Thereby, cooking enjoyment should be promoted and especially boys should be encouraged to develop their cooking skills. Nonetheless, there is an increasing consumer's demand for ready-to eat foods, with men in particular reporting eating convenience foods more often. The consumers, as well as the industry should be encouraged to focus on 'healthy' convenience foods, which are low in sugar and fat. It is evident that older men with low cooking skills in particular might profit from those kind of ready-to eat foods.

Published as: Hartmann C, Dohle S, Siegrist M. (2013). Cooking skills for balanced food choices. *Appetite* 65, 125-131

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# Cooking skills programs for adults – why are they needed and are they effective?

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Lack of cooking skills and poor cooking confidence have been connected with poor food choices including inadequate fruit and vegetable intake<sup>1</sup>. Cooking skills are on the decline in modern western societies to the point that it is of public health concern<sup>2</sup>. This de-skilling may be the result of a number of factors - a reduction in the traditional pathways of learning to cook, technological advances in the production and availability of processed ready-made meals, changes to social norms around cooking and eating, and greater participation of women in the workforce<sup>3</sup>, amongst other hypotheses.

In response to this reported decline, recently there has been an increase internationally in the number of not-for-profit community cooking skills programs designed to improve individuals' cooking skills and confidence. The question however remains: Are these programs effective in increasing cooking skills and confidence and do they translate to an increase in healthier cooking and eating behaviours? To date, the evidence base is limited. In a recent systematic review of adult cooking skills programs, only one evaluation was identified as suitably robust to provide reliable findings with respect to program effectiveness<sup>4</sup>.

## Jamie's Ministry of Food, Australia

Jamie's Ministry of Food is arguably the most well-known community cooking skills program aimed at teaching basic cooking skills to non-cooks. The program usually consists of 10 weekly, 1.5 hour cooking skills classes that promote the preparation and cooking of simple, fresh food quickly and easily.

Established in the United Kingdom where there are currently six active sites, the program has been adapted for Australia. The first Australian site opened in Ipswich, Queensland in 2011 co-funded by the state government and a cooking appliance retailer, The Good Guys. Ipswich was intentionally targeted due to its rising rates of overweight and obesity and a significant proportion of residents of low socioeconomic status. Interestingly, recent Queensland state wide monitoring also identified low vegetable and fruit intake in Ipswich<sup>5</sup>.

## Evaluation methods

There has been substantial investment in the Jamie's Ministry of Food program from both public and private sources in both the United Kingdom and in Australia, yet there is limited evidence about the program's effectiveness. As a consequence, Deakin University has been commissioned to evaluate the program in Ipswich.

The evaluation of Jamie's Ministry of Food Ipswich extends over the period November 2011 to mid-2014, and employs a longitudinal, mixed methods design to explore participant impacts, outcomes and experiences of the program. The quantitative component is a quasi-experimental design consisting of an intervention and a wait-list control group of adult participants. Repeated measures are collected via questionnaire, at baseline, program end and six months post completion. The targeted sample size is 142 participants in each group. Primary outcome measures are a change in cooking confidence and in self-reported vegetable intake. Secondary outcomes include change in individual cooking and eating behaviours as well as changes in social connectedness and self-esteem. The latter measures were included as the program is expected to impact in a broad range of ways; testing will be undertaken to determine whether these factors work as potential moderators, facilitators or barriers to cooking and eating behaviour change.

A longitudinal qualitative study will further enhance understanding of how and why the program impacts on participants. It will draw on a sample of 15 participants and gather accounts of their experiences and behaviour change over the course of their journey through the program. Repeated semi-structured interviews have been conducted at program commencement, program completion and six months after completion.

Drawing on the strengths of both quantitative and qualitative research paradigms, this comprehensive evaluation of Jamie's Ministry of Food Ipswich will represent a valuable contribution to the literature on the effectiveness of community-based cooking skills programs. It will provide evidence as to the program's effectiveness in arresting declining cooking skills and confidence. It will also demonstrate the capacity of the program to translate to healthier cooking and eating behaviours. The evaluation results, due for release in late 2014, will inform future investment in this and other equivalent cooking skills programs.



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# Cooking crisis: What crisis?

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## To cook or not to cook?

Cooking has long been a topic of discussion and concern among those arguing for a healthy diet. Chadwick, the great public health reformer, in 1842 called for cooking education<sup>1</sup>.

The Obama administration has heartedly endorsed cooking, mainly through the First Lady and a program called Cooking Matters, to address the obesity problem in the United States (<http://cookingmatters.org/>).

Changing practices in cooking and food preparation and the way we eat<sup>2,3</sup> some argue are driven by a loss of skills. Others argue that there is not a loss of skills but a changing set of skills<sup>4</sup> driven by the changing nature of food provision and demands on our time<sup>5</sup>. Our research in 1999 showed the United Kingdom population with low levels of skills, with the rich having higher levels of a skills deficit<sup>6</sup>.

## Evidence for cooking interventions

There is emerging evidence that in communities that cook<sup>7</sup> there is an enhanced health outcome but we do not know how best to transfer those skills and to encourage their continued use in the light of changing times and habits.

### ➤ The evidence for schools

The promotion of cooking in school settings are often based on a relationship between cooking and health outcomes<sup>8</sup>. One of our most recent pieces of research explored the transference of skills from the classroom to the home<sup>9</sup>. We found some short-term transference of skills and acceptance of tastes to the home. A key success was with vegetable and vegetable consumption and the encouragement to prepare vegetables as part of the meal plate and not just hide them away in foods as an ingredient. Tasting and peer approval appeared to be important in encouraging this.

### ➤ Community cooking for adults

Cooking classes for adults in the community are popular food initiatives. These are often run to fill gaps in knowledge and skills that adults have not managed to acquire. A review of cooking for adults concluded that the available evidence is inconclusive for community based adult interventions, largely due to poor quality evaluations<sup>10</sup>. This lack of evidence has not stopped public and private bodies funding such initiatives.

## So?

The main drives for the teaching of cooking have come from the health sector, which believes this is a way forward to deliver healthy eating. Many celebrity chefs have linked to this, the most obvious being Jamie Oliver (others are Stephanie Alexander in Australia and Alice Waters in the USA). The majority of claims are not based on evidence and often seem to hinge around a lack of public health imagination. So we invest resources in programmes without a clear evidence base. What we need is to invest in research to develop a robust evidence base from existing activities.

There are many reasons to teach cooking to people, at its simplest this is a necessary citizenship skill which helps in many areas such as food choice and sociability, even if an individual decides not to cook. The evidence suggests that cooking has a role to play in extending diets by following the following principles:

- Allows young people/adults to prepare, experiment, taste and try new foods in a safe environment.
- Models of teaching which rely less on demonstration and more on involvement are more likely to be successful. Demonstration of a dish or meal preparation tends to suggest a proper way or look to a meal/dish.
- Those which focus on meal preparation with vegetables as a key component or side dish are more likely to result in healthy eating.
- Linking skills with confidence is important.



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