

International Journal of Health Promotion and Education, 2013

<http://dx.doi.org/10.1080/14635240.2012.758884>

Teaching university students to cook, to improve their diet: a pilot study at Nottingham Trent University

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Objective: To determine if it is feasible to teach students to cook cheap nutritious food that they would want to reproduce in their own student residences. *Design and methodology:* A cohort of interested students was trained using the established 'Let's Get Cooking' model (www.letsgetcooking.org.uk 2012) which has been used in schools across England to establish cooking clubs within communities. These students developed a programme of four weeks of two-hour cookery lessons aimed at the student lifestyle. A pilot was run in the summer term of 2011 with lessons given to willing participants for free. The participants, both those who carried out the teaching and those who were taught were all asked to evaluate the pilot. In the following autumn a further course was run using some of the same 'teachers' but this time the students paid £12 (GBP) for the course of lessons. *Results:* The feedback from those taught to cook in the sessions was very favourable with 91% of respondents rating the sessions as excellent or good on six aspects of the course. All the participants felt their skills had improved and they felt more confident about cooking. On the second part of the pilot where the students had paid, 89% rated the sessions as excellent or good on the same criteria and 100% had enjoyed the sessions; 84% thought their skills had improved and 75% felt more confident about cooking after the course. Fifty per cent indicated that they would continue to cook healthy food after the sessions had ended. *Conclusions and implications:* Evidence suggests that many students have not learned to cook and do not eat healthily; however, they are prepared to pay and attend cookery classes aimed at their needs. What is not known is, if by empowering students to cook cheap healthy food, whether or not they will continue to do this after the classes have ended?

Keywords: 'Let's Get Cooking' clubs; nutritious; healthy; cooking skills; economical

Introduction

Students generally have little money available to spend on food. There have been various surveys about what students are eating; a recent one by Sainsbury's (Watson 2010) suggests that the top three meals were spaghetti bolognese, jacket potato with a filling and frozen pizza. Whilst this survey suggests that burgers and chips and Pot Noodles are well down the list at 15th and 16th places, it does not say whether these students are making their bolognese, and the ready meal was also well up the student list in 9th place. We are as a nation getting fatter, a condition which is multifactorial but is also linked to our consumption of food high in fat and sugar, low in dietary fibre, high in processed food and low in fruit and vegetables. It is well documented that we are storing up a great deal of ill health and expense for the future, as the obese are more prone to coronary heart disease and type 2 diabetes. Conditions such as constipation are diet related and the increase in

bowel cancer can also be linked to diet in many cases (Pan et al. 2012). 2013 Institute of Health Promotion and Education

A recent study in Spain (Pich et al. 2011) provides evidence that young people are well aware of what a healthy diet consists of, but many do not actually follow it in practice and there is evidence to suggest that eating habits formed in teens and through years at university can stay with people for life. Education and information alone do not mean that the population will in fact follow a healthy diet. An American study (Ha and Caine-Bish 2009) showed that providing a specific course in nutrition to university students in fact increased the consumption of fruit and vegetables by the group, post course. The question is whether or not this is sustained in the long term. This study suggested that although overall consumption increased, it was still below the recommended level of consumption for fruit and vegetables.

Research in Bournemouth (Edwards and Meiselman 2003) of students during their first year at university suggested that they were eating less after they left home but that this could be because students were unwilling or unable to spend much of their income on food. This decrease in consumption did not, however, cause them to lose weight, as their intake of alcohol was increased and their lifestyle at university was possibly more sedentary than when they lived at home. It is clear from this study that intake of complex carbohydrate as a source of energy is below that recommended.

This paper will focus on delivering cooking classes to students at Nottingham Trent University (NTU) following training provided by 'Let's Get Cooking' (LGC). 'By 2003 Britain ate more ready meals than the rest of Europe put together' (Blythman 2006) and as far back as 1996, there was concern about the position that the teaching of food preparation skills had in British schools (Stitt 1996). It is a fact that cooking fresh ingredients to make meals is on the whole both cheaper and more nutritious than buying food such as ready meals or 'fast food'.

Results of research undertaken in Northern Ireland (Devine et al. 2006) indicated 70% of students said they liked cooking, 28% said they actually cooked their main meal from scratch and a further 20% neither liked nor disliked cooking, leaving only 11% in this survey who actually disliked cooking. In addition to the 28% cooking from scratch daily, a further 40% cooked every two–three days. These findings would suggest that there is a willingness amongst students to cook. The main reasons given for not cooking in the above survey was lack of time (57%) followed by eating pre-packed/convenience foods (40%). Twenty seven per cent said they lacked the knowledge of cooking a variety of foods, but only 4% said they did not know how to cook at all and 21% cited money as an issue.

In another recent study undertaken in the UK (Lloyd et al. 2011), there was found to be a huge discrepancy in the cost of buying healthy food to feed a family on a low income for a week. It was concluded that in some areas it could well work out cheaper to buy the high-fat unhealthy fast food in local outlets, particularly once you have taken into account the cooking of the food.

In addition to perceptions which can be fuelled by such surveys, there is no shortage of material to explain the changes that have taken place to cooking and eating in Britain in recent decades. Both Blythman (2006) and Steel (2008) explain how we are all being told that we do not have time to cook and that food is merely a fuel rather than something to be enjoyed. The supermarket which has grown at the expense of independent and specialist food shops is providing us with a vast array of food which we are being told we do not have the time to cook ourselves. Not only that but the

supermarkets would like us to think such food is as good as, if not better than, any food we might be able to cook for ourselves.

So we can see that students are financially poor, they may not have been taught to cook, they may perceive cooking as a waste of time and possibly expensive and they may well like the food they are currently eating.

It is clear that most people know what they should eat to be healthy and therefore knowledge alone is not enough to get us to 'do the right thing'. Research has shown (Eertmans et al. 2001) that if we want to change the eating habits of people, then they need to like the food we want them to eat more of. In order to like a food, people have to be repeatedly exposed to it over a period of time. Clearly many of the students coming to our Higher Education Institutions (HEI's) have been exposed to foods and ways of eating which are not good for them in the long term. On this basis, it could be argued that providing demonstrations or recipe cards/books is not going to bring about a change to healthy eating on its own. However, a cooking club where students can attend regularly and be exposed repeatedly to the skills of preparing fresh foods, and eating the food products made during the sessions is more likely to encourage them to want to repeat this in their residences, particularly if they have come to like the food they have cooked. In an interview about student food Warren Belasco (BBC Radio 4 2010) was very clear that the most important effective strategy was to teach students to cook for themselves. Once students can cook, it was argued they can start to make choices around beliefs and sustainability.

Methods

Having reviewed the various points of view on the topic of improving the diet of young people, it seems clear that we need to have a nation of people who cook food using fresh ingredients. As Stitt (1996) has pointed out, pupils are not learning enough cooking skills through the school system; therefore, university is a good place to offer the opportunity for students to learn skills to help them through that new experience of living away from home. Students are offered lots of opportunities to join clubs and societies; therefore, learning to cook will fit this model. Cooking classes will help to give students the skills and confidence to cook, but if they are to change what they are eating they also need to like the food.

This study started from two pressures on undergraduate students at NTU: the first pressure was that undergraduate teacher-training students do not have any prolonged experience of teaching before the third and final year of the course (unless they arrange it themselves), and the second is the concern nationally about the poor standards of nutrition within the population at large. Anecdotally it would seem that students exist on a diet of takeaways and alcohol. By setting up a club to teach undergraduates the skills to cook for themselves, it is hoped to help them to eat more healthy, nutritious and inexpensive food. Key to this is that the students attending such a club are taught by other students, so that the club is 'run for students by students'. The running of the club will also provide valuable teaching experience to initial teacher-training students.

To launch the cooking club, funding was needed, which arrived on January 2011 from the School of Education within NTU. The funding provider stated 'the project had to be short term and the funding must be used before the end of the academic year, but the impact of the project should be long term or sustainable'.

The funding was needed in order to train the students to run the club. The trainers from LGC (2012) were used, so that we could use their extensive experience of setting up clubs, which work with both

adults and children. LGC also has a website (www.letsgetcooking.org.uk) with resources to support the club after the trainers have done their job and moved on.

Eighteen students were trained to become the LGC leaders for the NTU LGC club. At the end of the two days of training it was agreed to run the club sessions for four weeks, building on the skills each week. The sessions were designed to teach students to cook the sort of food they would probably choose to buy ready-made or would be viewed as good cheap meals. A wide variety of dishes were prepared by the student participants, providing the opportunity to try lots of foods and find recipes they really like. By having four sessions the students were being given more opportunity to get to like the food.

The club was run at the end of the academic year with several parallel sessions. Because this was a pilot designed to find the strengths and weaknesses of the club, the sessions were free for attendees and all attendees were volunteers with no compulsion to attend. Perhaps because it was free, coupled with the fact that the sessions were placed at the end of the academic year (during the exam period), attendance was not as good as those running the classes would have liked. By the last session some classes did not run. This first pilot had to be run during the summer as the funding provider wanted impact and a report by August 2011.

All of the students enrolled to attend the summer session were asked to complete a pre-course questionnaire about their eating habits and knowledge of healthy eating. At the end of the sessions both the participants and those teaching the classes were asked to complete evaluations.

In the autumn of 2011, a further two courses were run, with each student paying £12 for the four sessions; the courses were advertised to all students via university email. At the same time, a group of four second-year Childhood Studies students were assigned to a commissioned inquiry (CI) to help in the research. These CI students were briefed as to the work which had already occurred and given some tasks to assess the impact of the club. The CI team were asked to visit the club during the first and last sessions to talk to the participants in a casual way to find out what they thought about the club and what they had learned. Beyond the club, the CI team were also asked to set up a focus group on campus to talk to first-year students about their eating habits since arriving at university.

Results and discussion

The results of the pre-course survey suggested a clear distinction between those who eat breakfast and those who do not eat breakfast. As the answers were so different the replies were split on the basis of whether or not breakfast was consumed for the purpose of analysis. Those who ate breakfast on the whole did not tend to eat between meals and on the whole their food choices throughout the day did not include confectionary, high-fat snacks and fizzy drinks. This contrasted very strongly with those (about a third of the whole group surveyed) who skipped breakfast. The latter group was consuming large quantities of confectionary, high-fat snacks and fizzy drinks; this group did not tend to eat just three or four times per day, but were snacking/grazing throughout the day. None of those surveyed appeared to be eating five portions of fruit and vegetables. The results are summarised in Tables A1 and A2 (Appendix 1).

Seventy-six per cent of the respondents (irrespective of whether or not they eat breakfast) to the pre-course questions knew that they should be eating five portions of fruit and vegetables per day. Twenty nine per cent were spending more than 30 minutes preparing meals from scratch, 41% were spending only between 15 and 30 minutes preparing a meal, while 11% were spending 10–15 minutes, often buying a takeaway or ready meal as their main meal of the day. Around 6% were eating alone, while the rest were eating in groups of different sizes.

Ninety-one per cent of those who attended the first pilot during the summer were clearly satisfied with the lessons they received and apart from the one who rated the learning as poor, everyone else said they had enjoyed the sessions, had improved their knife/peeler skills and were more confident about cooking. The one respondent who had not enjoyed the sessions clearly already knew how to cook and perhaps thought the club was a way of improving skills rather than giving confidence to beginners. Comments from the students suggested that they had enjoyed the variety of recipes, the friendliness of the student teachers and the hands-on experience. Improvements that were suggested included wanting more classes and even quicker recipes or recipes suggested by the group members. Table A3 (Appendix 2) summarises the responses.

For the autumn pilot, 89% of attendees rated the sessions as excellent/good on the criteria and all had enjoyed the sessions, 84% thought their skills had improved and 75% felt more confident about cooking after the course. Almost 70% indicated that they were likely to continue to eat more healthily after the course. Comments from these paying students again were positive about the variety of recipes and the friendliness of the teachers; a summary of the positive comments from the students included 'the variety of recipes', 'the good friendly teachers (student trainers)', 'something new to try at home' and 'eating the food'! Others identified 'the ability to ask questions whilst cooking', 'really nice food', 'improving food preparation skills' and 'learn how to cook and eat healthily'.

Table A4 (Appendix 2) summarises their responses. Suggested improvements from the participants were 'more sessions', 'more variety of meals', 'quicker dishes', differentiated sessions for different abilities and holding an exhibition of 'hometown dishes'.

Overall, the satisfaction rate seems to be good with some very positive feedback; there were no aspects that were rated as poor by any participant and the improvements seem to centre around wanting more, not taking out what was already being offered. These were paying participants unlike the first pilot. The conclusion is that the model works at the price charged.

The CI team spoke to first-year students who were not attending the cooking classes and found that only 25% of males and 50% of female students actually consider their diet to be healthy and when asked what prevented them from cooking healthy food for themselves, they identified convenience (25%), time, energy and skills all at 20%. Within the focus group, 100% of the males and 60% of the females expressed interest in attending cooking classes.

The findings of the CI team when chatting to participants at the classes indicated that 100% were satisfied with the classes; however, only 50% indicated that they thought they would continue to cook healthy meals after the classes had ended.

The results of the evaluations completed by the students who ran the cooking classes are summarised in Table A5 (Appendix 2). Seventy-five per cent of the students teaching the sessions rated them as excellent or good. The poor ratings were from the teachers of the last group of the week who often found that previous groups had taken too many of the ingredients ordered, or possibly some of the vegetables had started to deteriorate if they had not been placed in the fridge. All of those who taught the classes said they had enjoyed teaching the sessions, and they believed that the participants also enjoyed the lessons, had improved their skills and had become more confident.

Other comments from these trainers included 'fantastic concept', 'improving communication and organisation skills', 'feedback on doing a good job' and 'having all the ingredients provided'. Improvements suggested included wanting more sweet dishes.

Conclusions

Having run the club twice now including with students paying for the experience, it would seem to be a success with all students enjoying the sessions. Those delivering the sessions also enjoyed the experience and were able to fit it in around their other commitments. Further research will be needed to find out if those taught to cook at the classes continue to cook from scratch after the course has ended.

The pre-course survey results indicate that students want to spend as little time as possible preparing their meals. This would suggest that there needs to be an emphasis in the classes on how cooking for themselves can save time, e.g. by preparing large quantities to last more than one day or preparing basic sauces like tomato pizza topping to freeze and save time another day.

To continue the club year on year, there needs to be a training input to bring in new leaders; however, this needs to be carried out in-house as the cost of using LGC again is prohibitive. The benefits to the students running the club is enormous in terms of experience, particularly for those wishing to be teachers, but also for those studying Nutrition who are likely to be working with the public to improve diet.

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Appendices

Appendix 1

Table 1 Summary of typical 2 day diet analysis by those who claim to eat breakfast

- All had something for breakfast and most quite substantial.
- Most had cooked or croissant/crumpets, 5 had some kind of cereal/oats.
- 1 had such things as sandwiches or leftover dinner.
- 6 had tea or coffee, one had lemonade, 2 water or milk and some nothing to drink.
- Only 1 mentioned sugar in hot drink.
- Most had nothing mid- morning, 2 had fruit and a couple water.
- Most had sandwiches for lunch, 1 soup, and fruit for some and only 2 mentioned crisps.
- Some had a healthy cooked lunch, with only 2 having pizza or fish and chips/fish fingers.
- Only 1 had biscuits/chocolate.
- 4 had nothing mid- afternoon, 4 had fruit and a drink and 2 a drink only (water), 4 had a hot drink and chocolate/biscuits (some overlap, different two days).
- Evening meals seemed to be very healthy and cooked in most cases, with 1 mention of fish and chips, another of chicken and chips (although homemade!) and a steak and chips – otherwise healthy and balanced.
- 5 had nothing for supper, some tea and toast/sandwich/biscuits/chocolate

- All but 1 had nothing or water for breakfast and 1 had a cooked or SU vegetarian breakfast one day.
- 2 had nothing mid- morning, 2 had crisps, cereal bar, muffin/chocolate or a biscuit, 1 had fruit and 1 a protein shake.
- 3 had sandwiches for lunch, all with crisps/chocolate, 1 had either a jacket potato or couldn't be bothered due to lectures, 1 had a meal deal and 1 a vegetarian meal or nothing.
- 2 had nothing mid- afternoon, 1 had fruit/biscuits and/or a drink and 1 a sandwich or burger with a fizzy drink, 1 crisps and 1 a protein shake.
- Only 3 evening meals seemed to be healthy or very healthy and cooked, 1 ranged from healthy to usually something with chips (the protein shake student!), 1 pizza or pasta and 1 nothing or blank but did have a vegetarian lunch or regular plate mid-afternoon.
- 3 had nothing for supper, 1 had Weetabix, toast or leftover dinner, 1 chocolate pudding and 1 snacks such as noodles, crisps, olives, cereals or ready meals.

Appendix 2

Table 3 Summary evaluation from summer pilot

	Excellent	Good	Average	Poor
Recipes selected for each session	5	9	1	
Easy to complete the recipes after the session on your own	8	6	1	
Standard of the teaching you received	10	5		
Your confidence to try out different recipes (not from the course)	5	8	2	
Amount you have learned by attending the sessions	6	7	1	1
Likelihood that you will eat more healthily after attending this course	7	6	2	

Table 4 Summary evaluation from the autumn pilot

	Excellent	Good	Average	Poor
Recipes selected for each session	6	7		
Easy to complete the recipes after the session on your own	8	3	1	
Standard of the teaching you received	9	4		
Your confidence to try out different recipes (not from the course)	5	6	2	
Amount you have learned by attending the sessions	3	8	2	
Likelihood that you will eat more healthily after attending this course.	2	7	4	

Table 5 Summary of trainer evaluations

	Excellent	Good	Average	Poor
Recipes selected for each session		4	2	
Foods delivered for each session	1	1	3	1
Session plan provided	2	2		
Amount of work for the time available	2	3	1	
Amount of work needed prior to the session to set up etc.	2	3		1
Amount of clearing up required after the session		5		1