

S11 CHANGING CONSUMPTION DUE TO FOOD SYSTEM CHANGE: THE ROLE OF MARKETING, BEHAVIOURAL NUTRITION AND SOCIAL INEQUALITIES

Co-chairs: J. HALFORD & J. BREDA (co-organized by N8 Agrifood)

Food systems and food choices

C. REYNOLDS – Sheffield University - UK

The global food system has become increasingly complex with many factors influencing food choices - why, how and what food is purchased and how, what and when food is consumed. Using the UK diet from the 1950s to 2016 as an example, this talk will introduce various themes within the current food system, and discuss how the UK food system evolved to become this complex.

Themes highlighted will include changes to farming, manufacturing, and the transport of food; as well as the evolution of shopping and eating habits. These themes will then be linked to their effects on food choice and health outcomes. Likewise, the demographic and lifestyle transformation over the last 65 years will be discussed.

Specific attention will be given to the fragmented and contrasted dietary patterns of the most rich and poor income groups. With examples provided of dietary advice and interventions that can be offered to promote healthy sustainable eating by harnessing the current food system and food choice trends.

Recommendations for daily practice:

1. The food system is something we all interact with every day – there is potential to change many different aspects of individual's food environments, food habits, and food practices;
2. Dietary changes are not a new phenomenon. However, we can now amplify the positive trends to produce positive health outcomes (What are the positive deviants doing?);
3. Diets have become fragmented by income group and demographics. New tailored messaging strategies are required to speak to an individual's diet and habits;
4. Ways of cooking and time use are changing, we must understand what people are doing (and aspiring to do) in order to shift food choices and produce positive health outcomes.

Household food insecurity and promotion of healthy nutrition

A. LINOS – Athens Medical School - GR

Results of the program DIATROFI, a humanitarian aid program addressing the results of the Greek crisis, are going to be presented. The program addresses food insecurity and promotes healthy nutrition among school aged children and their families, residing on the most underprivileged areas in Greece.

From spring 2012 to June 2018, over 120,000 children have benefited with 14 million meals distributed during early mornings every school day.

Food insecurity and dietary habits based on 160,000 questionnaires filled by parents of the benefited children indicate that food insecurity measured with the Food Security Survey Module (USDA) questionnaire ranged between 54% and 66% in the beginning of each school year and between 48% and 59% in the end of each school year. On average, the share of students not consuming fruits or milk decreased by 20%, whole wheat bread by 15% and vegetables by 10%; moreover the portion of students with low adherence to Mediterranean diet fell by more than 10%.

In addition to the descriptive data, results of 2 randomized trials examining the methodological approach to improving dietary habits will be presented. A number of schools were randomized for two consecutive years. In the first school year (2013-2014) comparison between meal distribution and combination of meal distribution and healthy nutrition promotion activities were conducted. Results showed that students receiving in addition to the meal, the healthy nutrition activities had 1.6 times higher probability to improve weight status from overweight/obese to normal and 2.5 times to improve weight status from underweight to normal. The probability to increase the consumption of milk/yoghurt or fruits was 1.2 times higher in the group receiving the healthy nutrition activities. In the second school year (2014-2015) healthy nutrition promotion activities were compared to the combination of meal distribution and healthy nutrition promotion activities. Students receiving in addition to the healthy nutrition activities, the meal, exhibited significantly larger decrease of household food insecurity (by approximately 10%) and this decrease was more evident for food insecure families (16%), underweight (20%) and overweight/obese children (12%).

To this end, combination of food aid with healthy nutrition promotion activities in school, seems the most effective pathway towards reducing food insecurity and improving the health and the dietary habits of students.

With: Petralias A, Zota D, Dalma A, Georgakopoulos P, Pantazopoulou A, Kouvari M, Drymoni P, Kastorini CM, Haviaris AM, Veloudaki A

Unhealthy food marketing techniques and food consumption impact

E. BOYLAND – University of Liverpool - UK

This talk will provide a brief overview of the literature showing that food marketing has a detrimental effect on dietary health by influencing both determinants of eating behaviour (e.g. attitudes, preferences) and actual eating behaviour (consumption). The effects of both traditional broadcast media and newer digital marketing techniques will be considered, acknowledging that far more is known of children's exposure to broadcast advertising and the power of that advertising to influence behaviour (e.g. the impact of TV advertising exposure on the amount of food consumed has been repeatedly and robustly demonstrated). New digital methods of marketing delivery are challenging for public health researchers, both in terms of measuring exposure and in empirically demonstrating impact. However, emerging data on digital marketing and its effects will be presented, highlighting some of the novel opportunities afforded to marketers by digital techniques.

There have been calls across Europe for stricter regulation of food marketing, particularly to young people, and this session will evaluate the strength of the evidence to underpin policy action in this area. The evidence to support a causal relationship between marketing exposure and weight gain in youth will be discussed.

Recommendations for daily practice:

1. Limit children's screen time and therefore limit advertising exposure.
2. Encourage young people to be critical viewers of marketing, teach them to consider the motives of the advertisers.
3. Try to minimise the influence of "pester power" on family food purchases.

Healthy promotion through digital techniques

F. FOLKVORD – Radboud University - NL

Systematic reviews and experimental studies have repeatedly shown that food promotion for energy-dense foods stimulates unhealthy eating behavior among children. Moreover, most food promotion techniques target automatic process and focus on the rewarding aspects of palatable food products, inducing snack intake subconsciously. Due to the effectiveness of these food promotion activities children consume too much energy-dense foods and not enough healthy foods, like fruits and vegetables, according international dietary standards. Eating a diet rich in fruit and vegetables is essential for growth and development, protects against many illnesses including cardiovascular disease, stroke, and cancer, and increases mental well-being. Numerous studies have consistently shown that dietary intake patterns of children are poor and do not meet (inter) national dietary standards, especially among young children from low socio-economic status. In contrast to fruit and vegetables, energy-dense snacks have intrinsically rewarding properties that make them "wanted" and "liked", thereby inducing unhealthy eating behavior.

Considering the effectiveness and success of food promotion of unhealthy foods, it is highly promising to examine *whether, how, and when*, food promotion for healthier foods might increase the intake among children. Different empirical studies have been conducted that tested the effect of healthy food promotion, but an overarching theoretical model that explains and predicts these effects is missing and needed. This presentation describes recent studies that have tested the effect of healthy food promotion on children's eating behavior and aims to present an integration of empirical findings in a new theoretical framework, the *Healthy Food Promotion Model* that increases the understanding of the effects of healthy food promotion on eating behavior that might also be used for future research in this area.

Recommendations:

1. One important recommendation in daily practice is to make healthy foods more available for youth, in order to make it the easiest choice whenever they are craving for snacks or have a moment to eat. An important marketing strategy of energy-dense foods is high availability;
2. Second, making the energy-dense snack option more difficult increases also the possibility that children will choose for the healthier option;
3. Third, if children are not intrinsically motivated to consume healthy foods, it might be an effective strategy to make it more appealing and increase extrinsic motivation to consume the healthier food. After having tasted the food repeatedly for extrinsic reasons, they might start to like the foods, and eventually choose more often the foods because of intrinsic motivation;
4. Fourth, try to focus on automatic processes when aiming to improve children's eating behavior, and not so much on education and improving knowledge, because they have been shown to have limited effects on improving dietary intake.

S12 HELPING SCHOOL CHILDREN EAT HEALTHILY: GPS AS A VITAL FORCE FOR EDUCATION AND IMPACT ASSESSMENT

Co-chairs: W. KALAMARZ & M. CAROLI

EU school scheme: a European tool to encourage good eating habits in children

G. MEDICO – EC-DG AGRI - BE

The scheme, funded through the European Union's common agricultural policy (CAP) with EUR 250 million per year, supports the distribution of fruit and vegetables and milk and milk products to schools across the EU as part of a wider programme of education about European agriculture and the benefits of healthy eating.

Previously operating as separate schemes for milk and for fruit and vegetables, the new combined scheme entered into force on 1 August 2017, ahead of the 2017-2018 school year. The reform aimed at simplification and enhanced effectiveness.

All EU countries participate in either or both parts of the scheme. Information on the number of participating children and schools is not yet available but the trend seems in line with the previous separate schemes that had proved successful*.

The distribution of fruit, vegetables, milk and milk products started in autumn 2017, accompanied by educational activities aimed at reconnecting children with agriculture and promoting healthy eating habits and by information and communication activities for the public.

The national authorities in charge of health and nutrition endorsed the list of fruit, vegetables, milk and milk products that children receive under the school scheme. Fruit and vegetables are available in 26 countries, with a clear priority for fresh products. As regards milk and dairy products, available in all countries, the trend is of healthier choices. Priority is for plain milk; fewer countries provide dairy products with limited quantities of added sugar and/or flavouring.

Many countries give priority to local purchasing, short supply chains and organic.

Authorities and stakeholders from the agriculture, health and education sector are associated to the planning and/o implementation of the school scheme.

**Around 12 million children participated in the school fruit and vegetables scheme and 18 million in the school milk scheme (data from the 2016/2017 school year).*

School food provision & EU School Scheme experience in Italy

S. **BERNI CANANI** – CREA Research Centre for Food and Nutrition - IT

In Italy the childhood overweight and obesity prevalence has reached 21,3% and 9,3% respectively in 2016 with large differences between regions and higher prevalence in the south of Italy (data from the Ministry of Health nutritional surveillance system “Okkio alla Salute”).

Children (8-9 years old) consume a too abundant mid-morning snack (53%), do not eat fruits and/or vegetables daily (20%) and have a daily consumption of sugary drinks or sodas (36%). These children have sedentary lifestyles and spend more than 2 hours a day playing with video games or watching TV (41%).

Moreover, the diffusion of social media is accompanied by a rampant disinformation, especially in the nutrition field. As reported by Eurobarometer (EBU Media intelligence Service «Trust in media 2017»), Italians refer to internet for health questions and trust in radio, tv, written press and internet. Unfortunately, it is not so easy to distinguish between scientific validated information and sensational fake news on the web.

The EU “School fruit and vegetables scheme” (SFVS), carried out in Italy since 2009, requires accompanying educational measures besides fruits and vegetables distribution for the mid-morning snack. The Italian Ministry of Agricultural, Food and Forestry Policies (coordinator of SFVS) assigns the measures to CREA, (Council for Agricultural Research and Economics), in particular to his Centre specialized in Food and Nutrition. The advantage of this approach is that the nutritional message dissemination can be scientifically accredited and univocal for the entire country.

Several actions were put in place, all of them with the aim of promoting fruit and vegetables consumption, involving students, families and teachers (e.g. teachers’ training).

The results obtained in the first year with the teachers training show the efficacy of the method, especially in improving children frequency of consumption of fruit and vegetables.

In fact, school is considered a target place to promote health and, when meals are provided by school canteens, the moment of lunch is also the occasion in which students can enrich their knowledge and curiosity towards the food, tasting new dishes and new flavours.

The Ministry of Health, in collaboration with many stakeholders, has drafted the Guidelines for school meals in order to standardize the indications at the national level to encourage, from childhood, the adoption of healthy and correct eating habits. These guidelines contain information on the organization and management of the catering service: roles and responsibilities, nutritional and intercultural aspects, criteria for defining the tender documents.

The possibility of attend the school canteen helps ensure full enjoyment of the right to education, to health and to non-discrimination, but their presence is not guaranteed in all the schools, again with regional differences and low prevalence in the south of Italy.

The strength of the measures adopted in Italy are:

1. Teachers personal engagement;
2. Integration with school daily activities, but “fun and exciting”;
3. Flexibility and adaptation to local context; particular attention in the involvement of the families;
4. Synergy with other Institutions (Ministry of Health and Ministry of Education).

The parents’ representatives: The unavoidable actors

V. DURIN – COFACE - FR

The parent suggests, the child decides.

If you confine yourself to the child you won’t be able to secure sustained improvement in their food choices because adults remain chiefly responsible for what’s provided. How can you get parents behind the project to change the food provided to their children and support what’s done in school?

Through the parent representative!

What is the parent representative and what is it for?

The parent representative is the link between what happens at school and the parent, but they also gauge areas for improvement and concerns. They seek to understand the school, support parents, inform and communicate. They can also collect feedback from parents and spearhead suggested changes to timetables but also the canteen provider; they gather queries for the headteacher, and support changes that may be worrying some people.

Parent representatives gather together in associations, with specific functions. The associations are partners of big institutional changes but always stand shoulder to shoulder with the child at the heart of the decision-making; nevertheless, they also defend the place of the parent, the primary educator. This is why they are a major player in any change within schools.

Recommendations on the ground:

1. Get in touch with the national or regional structure;
2. Contact the president of the school’s association;
3. Organise interaction with the association in advance, an evening meeting to understand and answer questions from all parents;
4. Closing: Afterwards, organise a wrap-up meeting involving the children, allowing parents to be present and local elected officials to be invited;
5. Dissemination: Use “black notebooks” as a guide to share your findings and good food practices but also to communicate what happens in class, because children don’t tell their parents much.

Joining up tools for optimal school food provision

S. STORCKSDIECK GENANNT BONSMANN – EC Joint Research Centre (JRC) - IT

Schools are a protected setting where children can learn and experience healthy dietary habits. It is positive to note that all countries in the EU have a more or less well developed school food policy in place – either established as mandatory standards or as voluntary guidance. Translating these policies into actual practice remains challenging at times, but a range of tools and measures are available that could be joined up for optimal school food provision and healthy eating habits of school children.

For example, the European Commission's Joint Research Centre (JRC) has developed technical guidance for the school setting on the public procurement of food for health. This guidance makes the case for health-minded food procurement that ensures school meals meet the nutrition standards defined in school food policies. Addressing the need for technical specifications that are clear and achieve the desired level of healthy school food provision, the report offers contract language phrasing built from real school food policy standards from across the EU. This information is complemented by hints on how to use procurement contract award criteria so that the most economically advantageous tender can be identified.

Furthermore, the JRC has produced a couple of toolkits that summarise the key components of successful interventions in schools to promote fruit, vegetable, and water intake. Typically such interventions combine multiple measures spanning the three areas of education, the environment, and the family, thus creating positive and engaging settings in which the healthy choice becomes the easy choice. For improving fruit & vegetable consumption, the analysis revealed that successful educational efforts covered aspects of classroom-based learning (e.g. dedicated lessons and homework, but also cross-curricular content), experiential learning (such as through school gardens and tasting sessions), games and competitions (incl. quizzes, song-writing competitions), and behaviour change approaches (role models, goal setting, individual feedback). As doctors are a trusted source of nutrition information, they can greatly support such educational efforts. Environmental components comprised increasing the availability of fruit & vegetables through various means, educating teachers and catering staff so as to be optimally supportive, and changes at the point of purchase or consumption (e.g. modifications to the display of foods to encourage positive behaviours). In this regard it is worth noting that Member States can enrol in the European Commission-funded school fruit, vegetable, and milk scheme. This scheme is designed to help promote the benefits of healthy eating to children and encourage them to increase their consumption of fruit, vegetables, and milk. Last, family involvement included organising parent evenings on healthy eating, encouraging food preparation together with children, and helping parents become good role models for regular fruit & vegetable consumption. Whatever the intervention eventually chosen, monitoring and evaluation are key to understanding which approaches work best in a given context; general practitioners are a vital force in assessing related health impacts.

Recommendations:

1. General Practitioners are a trusted source of information and should therefore be encouraged and enabled to deliver guidance on nutrition and health.
2. General Practitioners should be empowered and engaged in supporting education, monitoring, and evaluation as part of healthy diet and lifestyle interventions in schools and beyond.
3. Public procurement of food should consider health as a core aspect.
4. The JRC offers a range of useful tools and documents for promoting healthy eating in schools and invites anyone interested to consult the collection at <https://ec.europa.eu/jrc/en/news/helping-eu-schools-become-springboard-healthy-diet-and-lifestyle-habits>.

Round table

CONSIDERING THE ROLES OF KEY STAKEHOLDERS IN CHANGING F&V CONSUMPTION

Animated by: K. LOCK & P. JAMES

Panel:

- A. Delahaye – European Parliament – FR
- M. Devaux – OECD – FR
- G. Golfidis – EC – DG AGRI – BE
- W. Kalamarz – EC – DG SANTE – LU
- D. Sauvaitre – F&V Sector – FR
- A. Stavdal – WONCA Europe – NO

Introduction: Global benefits of F&V to health and sustainable development

K. LOCK – LSHTM - UK

This round table session will bring together experts from medical practice, economics, and food production with policy makers from the European Parliament, and European Commission (DG Sante, DG Agri) to discuss how to increase F&V consumption. It will consider how very different types of interventions - ranging from the work of doctors supporting individual patients to policies affecting the whole EU population- are all important parts of a whole system approach that is required to maximize the benefits of eating F&V for health, the environment, agriculture and the economy.

Questions for panelists

1. What is the evidence that fiscal policy levers increase consumption and production?
2. What can family and community doctors do to increase population consumption of F&V?
3. What are the challenges for current producers and all actors across the supply chain? What are the possible 'win-wins'?
4. How can the European Parliament become more effective in transforming the Commission's approach to the EU food chain in favour of fruit and vegetables? What has been achieved to harmonize different policies to better take into account the health benefits of F&V consumption?
5. Do European Commission investments maximize healthy diets while balancing the need to support profitable business? What is DG Sante doing to help counter the commercial influences on diet and promote F&V consumption?
6. What has been done in previous 5 years to increase F&V supply and ensure consumer prices are kept low? What are the challenges to European F&V policy in the next 5 years? How can current CAP policies be modified so that they favour F&V?