

From surveillance to development of nutritional guidelines

Dalla sorveglianza allo sviluppo di raccomandazioni nutrizionali

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Abstract

In Italy, like in most parts of the world, 30% of children and almost 50% of adults are overweight. This condition is one of the causes of non-communicable diseases responsible for over two thirds of DALYs, deaths and costs for healthcare. Current surveys confirm that overweight and obesity are associated with food habits which have changed, in Italy, in the last fifty years. Fewer and fewer people have been following a Mediterranean diet, which is considered an effective diet for the prevention of many diseases. The consumption of fruit, vegetables, legumes, whole cereals, and EVO oil has decreased, while the consumption of food with high energetic density and rich in sugar, salt, and added fat has increased, especially when eating out.

Schools and workplaces are the best places to promote healthy food habits and an active lifestyle. The aim is to involve families (including low-income families), educators, and catering services.

This type of intervention is not new to the National Health System and has already led to improvements: however, it is still possible to improve the use of resources and coordination between social, educational, and health services bringing the community to become its own health promoter.

Health operators have to be more aware of overweight as a health threat. The National Health Plan represents a commitment for Italy, the country hosting EXPO 2015, to fulfill the targets of the «Action Plan European Strategy for the Prevention and Control of Non-communicable Diseases 2012–2016» entrusting the Departments of Prevention with the interventions and development of a network of stakeholders.

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Key words: food, nutrition, health, survey, Mediterranean diet

Riassunto

Le sorveglianze PASSI e Okkio alla salute rivelano che in Italia un terzo dei bambini e quasi la metà degli adulti sono in sovrappeso. Una condizione nota per essere causa di malattie croniche non trasmissibili che sono responsabili di oltre 3/4 delle morti premature e di quasi la metà del peso delle malattie. Le sorveglianze confermano, inoltre, l'associazione di sovrappeso e obesità con stili alimentari che negli ultimi 50 anni si sono allontanati dal modello mediterraneo. Penalizzato è soprattutto il consumo di frutta e ortaggi, legumi, cereali integrali, olio EVO, sostituiti da alimenti a crescente densità energetica, ricchi di zuccheri, grassi e sale consumati in fretta e sempre più fuori casa.

Scuola e mondo del lavoro sono contesti importanti per promuovere un'alimentazione salutare e una vita attiva coinvolgendo i diversi soggetti interessati: la ristorazione, gli educatori, le famiglie (anche quelle più penalizzate perché di basso livello socio-economico).

Si tratta di interventi non nuovi per il Servizio sanitario nazionale e che hanno già dato qualche risultato. Restano comunque ampi margini di miglioramento circa l'uso delle risorse, il coordinamento fra gli assi sanitari, educativi e sociali, anche nell'ottica di coinvolgere l'intera comunità come imprenditrice della propria salute. Per parte loro, gli operatori sanitari devono essere consapevoli della grave minaccia per la salute rappresentata dall'eccesso ponderale (consapevolezza che secondo le sorveglianze è troppo bassa e in riduzione).

Il Piano nazionale della prevenzione 2014-18 impegna tutte le politiche e l'intero Paese, sede di *Expo 2015*, dedicato all'alimentazione, nella sfida per il raggiungimento degli obiettivi del «Piano di azione globale OMS per la prevenzione delle malattie croniche non trasmissibili 2013-2020», affidando ai Dipartimenti di prevenzione la *governance* degli interventi con l'impegno a sviluppare una rete integrata tra portatori di interessi (istituzionali e no).

(*Epidemiol Prev* 2015; 39(4) Suppl 1: 66-70)

Parole chiave: alimenti, nutrizione, salute, sorveglianza, dieta mediterranea

INTRODUCTION

The *2013 Global Burden of Disease* highlighted that, for the first time in the world, the number of diseases due to insufficient caloric intake (868 million malnourished people) was overcome by the number of diseases related to wrong dietary habits (1.5 billion of overweight/obese people),¹ a phenomenon involving even Italy.

Surveillance systems used in Italy, in particular «Okkio alla salute» (Take care of your health)^a 2014² and PASSI (Steps)^b 2010-2013³ pointed out that 30% of teenagers and almost 50% of adults are overweight and, in every class of age, overweight, lack of physical activity, and sedentary lifestyle were more frequent in the groups of population with lower educational and socio-economic level. For this reason we need interventions to support social equity. People often have a wrong perception about their weight and lifestyle. This phenomenon is common even among parents of overweight or obese children and it must be taken in account, since awareness is a key factor in changing inadequate lifestyles.

Surveillance data pointed out that wrong food habits were associated with overweight, and they were included among the main health threats by the *2013 Global Burden of Disease*. In particular, in Italy dietary factors represented the first risk factor (13% of the burden of disease expressed in terms of DALYs) for the most important chronic-degenerative diseases: cardio-cerebrovascular diseases, cancer, type II diabetes. A low fruit diet ranked fifth in the risk factor list. The 2014 «Okkio alla salute» surveillance pointed out that in Italy barely 8% of children 9 years old consumed the suggested five-a-day portions of fruit and vegetables, while one quarter of children did not eat any at all. Even the percentage of adolescents eating fruit and vegetables at least once a day was too low.⁴

As far as adults were concerned, the situation was quite similar. The 2010-2013 PASSI surveillance showed that, on average, in Italy only 10% of adults ate five-a-day portions of fruit and vegetables (48% of them consumed at least three portions). Women (11%), adults 50-69 years old (13%), educated (11%) and well-off (11%) people were more frequent consumers of fruit and vegetables.

There was even a geographic pattern: compliance to the five-a-day was higher in the northern regions (Liguria 18%) than in southern ones (Basilicata/Calabria 5%), in spite of the greater abundance of vegetables in the traditional meals of the latter regions.

From 2008 to 2013 there was a decrease in the consumption of fruit and vegetables throughout Italy (from 10.2% to 9.1%); the decrease was more evident in the central regions (from 10% to 8.5%), perhaps partly due to the economic crisis of the last few years.

According to the Nomisma study,⁵ in 2014 the yearly consumption of fresh fruit and vegetables was 130 kg per capita, not more than 360 g per day (it had been 400 g in 2000), with a decrease of 15% of fruit and 6% of vegetables in the last 15 years. Even though the economic crisis has certainly contributed to reducing the consumption of fruit and vegetables, it is in any case true that there was already a trend of progressive detachment of Italian people from the Mediterranean diet pattern: indeed the Mediterranean Adequacy Index moved from 10 (1960) to 0.5-1.5 (2013) and, paradoxically, this trend was more evident in those southern regions where the Mediterranean diet was born.⁶ On the other hand, there is growing evidence of the positive role that the Mediterranean diet has on the prevention of chronic diseases (cardio-cerebrovascular diseases, cancer, diabetes, neuro-degenerative diseases). The introduction of food and beverages with higher energetic density and richer in sugar, fat and salt, on the market is a major culprit. These kinds of food are promoted by aggressive marketing strategies, offering greater portions at lower cost, and are especially popular among poorer and less educated consumers, who represent the best target for junk food advertising campaigns. In addition, the import of food patterns like fast food, the decreasing time dedicated to the purchase, preparation, and consumption of food, the dramatic growth in the number of people eating out (12 million Italian eat out, Fipe 2012)⁷ for various reasons like study, work or leisure time, has led to the development of catering.

SCHOOL SETTING

However, catering represents an amazing context to promote a healthy education (decrease use of salt, increase consumption of fruit/vegetables and of all other food useful to fight obesity and chronic diseases) and it is a strong opportunity to develop health education, even at school. The *Osservasalute* report (2009-10)⁸ indicated that those attending a school canteen consume more fruit and vegetables. Services of Food Hygiene and Nutrition of the Department of Prevention are active in the field of health protection related to food through initiatives of nutrition surveillance like «Okkio alla salute», food safety and promotion of healthy lifestyles in different settings like schools, workplaces, and other public places.

The result of this commitment was confirmed by «Okkio alla salute» reporting in 2014 a decrease in the percentage of overweight children 8-9 years old: 20.9% were overweight (23.2% in 2008) and 9.8% were obese (12% in 2008). Furthermore, the improvement of food (reduced consumption of heavy snacks and carbonated and carbohydrate-rich beverages) and physical activity habits were reported.² The 2014 Italy HBSC (Health Behaviour in School-aged Children) surveillance regarding school teenagers (11, 13, and 15 years old) showed a decrease

^a OKkio alla SALUTE ("Take care of your health") is a surveillance system focusing on the weight of primary school children (6-10 years of age), their diets and the physical activities they perform (or any connected risk behaviour). It was started in 2007 within the framework of the "System to investigate behavioural risks of children aged 6-17", promoted and financed by the Ministry of Health/CCM, and it is coordinated by the National Centre of Epidemiology, Surveillance and Health Promotion (CNESPS) of the Advanced Health Institute (ISS), in collaboration with Regions, Local Health Units (AUSL), the Ministry of Education, universities and research bodies.

^b PASSI ("Steps") (Progress of health companies for health in Italy) is a health surveillance program which collects, on a continuous basis and through samplings, information about adults in Italy (18-69), about their lifestyles and behavioural risk factors connected with the onset of non-transmissible chronic diseases and the degree of knowledge and compliance with the action plans the state has been implementing for their prevention. Coordinated by the (CNESPS) of the Advanced Health Institute (ISS), it is managed by Local Health Companies directly, in cooperation with the regions and autonomous provinces.

in overweight in all ages, more evident among those aged 11 years (from 23.3% to 19.9% in males and from 17.1% to 13.5% in females) if compared to 2010. Even obesity decreased, especially among those aged 13 (from 4.5% to 3.3% in males and from 2.4% to 1.3% in females). Even in this case, like for the younger children, there was a geographic pattern showing higher percentages of overweight and obesity among central and southern regions. As far as food habits were concerned, it was shown that only a low percentage of students consumed fruit and vegetables at least once a day, even though the trend was growing if compared to 2010: the highest value was among 15-year-old girls.⁴ In spite of some data suggesting a trend inversion about overweight, which seem to support strategies used so far, there are still worrisome data indicating higher percentages of overweight and obesity among school children particularly in southern regions. That is why it is necessary to improve food habits and promote a more active physical lifestyle.

It will be essential to carry out programs within the 2014-2018 National Health Plan and related Regional Health Plans, according to scientific conclusions expressed by the «Okkio alla salute» technical committee (Report ISTISAN 15/1).⁹

The interventions in schools and catering are the most important, because these settings play an essential role in improving food habits.

In a context marked by a progressive reduction of economic and human resources, it is more and more important to develop comprehensive initiatives among ministries, local and regional health authorities, education, university, agriculture and environment sectors so as to avoid projects which are repetitive, redundant or – even worse – incoherent, like some interventions recently carried out in school settings. It is especially important to ensure continuity to interventions by including them in the school curricula.

The recent agreement between Health and Education Ministers, promoted by the General Direction of Health Prevention, is a right step in this direction. Besides, it is necessary to improve the coordination with the Minister of Agriculture, responsible for funds and achievement of the «Fruit in school» program, financed for the 2013-2014 edition (the fifth consecutive one) with over €20 million, according to the CE Regulation 1234/2007.¹⁰

These are important economic resources not only for fruit suppliers, but above all for the educational target of promoting consumption of fruit and vegetables among children, which, as previously described, is still inadequate. Since the «Okkio alla salute» project, which targets the same years and people as the fruit intervention, assesses the situation as unsatisfactory, assessment tools should be designed through common work between the Education and Health sectors. This initiative is also necessary to prevent criticism about catering services like those voiced, at times, by parents and confirmed by health authority checks. In other words, it is necessary to provide for new terms of contract in school catering, requiring meals consistent with the new LARN (*Dietary Reference Values for Italian Population*, edited by SINU, the Italian Society of Human Nutrition) and guidelines.

We should deliver few but clear messages and we should involve school catering (starting from day-care centres and kindergartens), educators, children themselves while they are eating meals and snacks. The reduction of heavy snacks from 80% (2008) to 50% (2014), recorded by «Okkio alla salute» is another important result.

The involvement of families is also essential as far as school catering is concerned. According to the Eurobarometro (EUFA 2010)¹¹ and PASSI (2012)¹² surveys and to the current experience of Food Safety and Nutrition services, such as that in Bologna, families are more and more careful about the quality of food, focusing particularly on pesticide pollution and preservatives. Consequently, families now demand organic food even though their belief is more based on some regional and national laws tending to promote regional products with a reduced environmental impact than on a proven health benefit.¹³

It should be noted that organic products have a cost that is 50% higher than conventional ones, in a context where official inspections show that pollution levels are very limited even for “conventional” fruit and vegetables: 0.4% were irregular *vs* 1.6% in the EU, with over 60% without any residual of pesticides, (source: *Health Minister – Official control on food pesticides 2012*).¹⁴

The choice of organic food, which is the right choice in the presence of sufficient economic resources, becomes questionable when needy families are not able to pay for the canteen fee and would prefer to give a sandwich prepared at home to their child to replace the meal that they cannot afford, with all the negative educational and managerial consequences that may derive from this situation. At times, as happened in Bologna, parents demand organic food, while, at the same time, requesting a replacement of fruit, vegetables, fish, and legumes that their children don't like simply because they are not provided in their home menu.

We should not forget that Bologna does not have a traditional Mediterranean diet, indeed its nickname is «fat Bologna» and its most traditional salami, «mortadella», is known abroad as «bologna» sausage. In fact, when people heard about the (moreover unfounded) possibility that, according to regional guidelines, «bologna» would be excluded from school catering there was a public debate on mass-media that lasted 4 months in 2012. In spite of this situation, in the territory of the Bologna AUSL (Local Health Authority) which includes 45 municipalities, we have already achieved a number of results. One hundred percent of students has access to a canteen, attended by the 90% of them, with a menu that is verified by the Food Safety and Nutrition service according to regional and national guidelines. The percentage of overweight 9-year-old children is below the cut-off of 25% (8.5% overweight and 5.9% obese *vs* 21% and 7.7% of the Emilia Romagna regional percentages and 20.9% and 9.8% of the national percentages), confirming a declining trend for obesity since 2010.

As far as food habits are concerned, the mid-morning snack is adequate in 74.4% of cases (*vs* 44.6% in Italy), while the 5 daily portions of fruit and vegetables are consumed by 13.2% of children (*vs* 8.1% in the entire Italy) (Okkio alla salute 2014).

This result was partly fulfilled thanks to the distribution of fruit, milk, or yoghurt, mainly in the mid-morning, in schools (69% of classes involved), while 52% of classes took part in initiatives of promotion and consumption of healthy food («Okkio alla salute 2014»).

In 2015, a survey on children's satisfaction with catering started in some primary schools, targeting children, teachers, and parents, and representing an important educational tool for all the people involved. This experience confirmed the following opinions, which moreover have already been scientifically acknowledged:

- school meals are the best occasion to promote correct nutrition;
- teachers' behaviour in school makes the difference between acceptance and refusal (as does parents' behaviour at home);
- children are actually able to judge themselves and are prone to change idea if they are listened to and motivated;
- an experience like this is able to involve even the most sceptical parents, focusing particularly on the environmental impact of food, as well as on promoting further considerations by consumers, public and catering services, and the entire community.

COMMUNITY SETTING

This experience was also included in a community project on healthy nutrition and active life for all ages, from day care centres for toddlers to social centres for the elderly. The name of this project is: «Cheers! Citizens as entrepreneurs of their quality of life».

The 2014-2015 project, carried out in a neighbourhood of Bologna (Navile), involved health (Local Health Authorities), education (university, schools), and social services (public services, and non-profit organizations).

Needs, resources (including already existing projects) and synergies were identified to develop a context enhancing healthy nutrition and active lifestyle. Process and outcome assessment tools were provided for each single step and at a community level. In the first 16 months, meetings and cooking workshops were held in 10 day care centres/kindergartens. Outdoor education with teachers, children, and parents was promoted in 33 primary school classes. The empowerment pathway involved parents, teachers, and children as active protagonists. Food education was included in literacy courses for foreign women, inter-generational cooking workshops were held in social centres, games and non-competitive sport activities were fostered within replanned green areas, parents and senior citizens became promoters of vegetable gardens in kindergartens, even a jail was included in interventions on food education, involving inmates who were also canteen cooks. Journals, participation to special events (white night, spring festival), and other activities were all documented with videos, photos, and interviews. As we wait for the project to end (December 2016), it is possible to disclose some considerations concerning an experience which confirms the usefulness of promoting community health, inter-generational bridges, and contrast of inequalities. The major challenge of the project is to achieve a

stable change in the community, one that will persist even after the conclusion of the project.

WORKPLACE SETTING

Another important setting for the enhancement of a proper nutrition style is the workplace, as highlighted by the most important international health agencies and the National Prevention Plan 2014-2018.¹⁵

The workplace is for an adult what school is for a child. It is a context in which even those penalized for cultural and social reasons can be involved, along with their family.

Another example concerning the Bologna AUSL (Local Health Authority) in the period 2012-2013 regarded construction workers, with structural interventions carried out in canteens and through cooperation with the vocational schools for construction workers of the Bologna province, local media, occupational physicians, manufacturer associations. As previously seen for schools, even in this case the actions were evidence based.

This is also true for actions performed in the healthcare sector. Many AUSLs, within their social accountability, have promoted actions in favour of their employees, taking into account proper nutrition, customer satisfaction, and environmental protection within the catering service.

On the other hand, it is essential that every health operator becomes a testimonial of healthy nutrition. In this sense, it is urgent to invert the trend showing insufficient attention to overweight by health workers, as described in the 2010-2013 PASSI surveillance report. Only 50% of overweight or obese people interviewed said they had received advice from a health operator about starting a diet to lose weight. Among those advised, 37% actually started a diet, while only 13% of those that didn't receive any advice did. In the period 2008-2013 the percentage of overweight people who were advised to follow a diet decreased by 5.5 % in all areas (-4.4% in the North and Centre and -8% in the South).

Last but not least, it is necessary to act on salt consumption, which in Italy is double the recommended daily intake,¹⁶ in order to reduce the occurrence of hypertension, defined as the first health threat in the *2013 Global Burden of Disease*.

An agreement like that achieved in some Italian regions (Lombardia, Emilia-Romagna)¹⁷ with bakers' representatives to reduce salt in bread should be extended to the entire country. A global policy of diminution in the use of salt (preferring in any case iodized salt) in catering, commercial, and domestic settings should be fostered.

CONCLUSIONS

This document's proposals concerning the complex issue of prevention of chronic diseases through lifestyle improvement, although not exhaustive, can help to set up a framework in which the targets of the «Action Plan European Strategy for the Prevention and Control of Non-communicable Diseases 2012-2016»¹⁸ may be fulfilled in Italy within National Health Plan 2014-2019 and the Regional Health Plans.

Departments of Prevention have a double role: implementation

of their own preventive interventions and governance of the interventions performed by other agencies and services, so it is possible to amplify the network of stakeholders by linking local communities to regional and national governments in a bidirectional manner.

Departments of Prevention are recognized to have «a leadership based upon the prevention culture of public health operators and enhanced by the previous National Prevention Plans». This leadership, as far as food and nutrition are concerned, belongs to Food Safety and Nutrition Services.

To fulfill the ambitious targets of the Prevention Plans it will

be essential to guarantee economic resources in terms of at least 5% of the National Fund for Healthcare, i.e., the amount allotted by law for all prevention. The percentage actually available for the entire Department is not more than 4.2%, and for Food Hygiene and Nutrition Services alone a scarce 0.29%.²⁰

In Italy, the country hosting «EXPO 2015 - Feeding the planet energy for Life», the Food Safety and Nutrition Services will starve in the near future without these economic resources.

Conflicts of interest: none declared

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