CHAPTER 10. VALORIZATION

The increment of knowledge offered by this thesis over current data, confirms that not only the contribution to health of traditional Mediterranean diet remains intact - when adherence to it is satisfactory - but increases its magnitude, because it adds a surplus-value and is potentiated by other foods or beverages, such as chili pepper and coffee, shown in this thesis to contribute to health and disease risk reduction.

The topic of this thesis is relevant and timely especially in light of the fact that unhealthy diets are major risk factors for a wide range of chronic diseases, including cardiovascular disease, cancer, diabetes as well as all-cause mortality. Specific recommendations for a healthy diet include: eating more fruit, vegetables, legumes, nuts and grains; cutting down on salt, sugar and animal fats (1).

In 2017, 11 million deaths and 255 million disability-adjusted life-years (DALYs) were attributable to dietary risk factors; among them, high intake of sodium (3 million deaths and 70 million DALYs), low intake of whole grains (3 million deaths and 82 million DALYs), and low intake of fruits (2 million deaths and 65 million DALYs) were the leading dietary risk factors for deaths and DALYs globally and in many countries (2).

As highlighted in the analysis by the Global Burden of Diseases (2), the Countries that have a diet close to the Mediterranean diet (higher intake of fruits, vegetables, nuts and healthy oils), are the Countries where the lowest number of diet-related deaths were recorded, in line with robust evidence on the lower disease/mortality risk associated with Mediterranean diet, also in non-Mediterranean populations (3,4).

In light of this, preserving a Mediterranean diet, is a major public health task to prolong survival and to reduce risk of major chronic disease.

The first major issue emerging from this thesis is that a number of modifiable factors (e.g. socioeconomic, psychosocial) may influence adherence to this healthy dietary pattern; thus, one of the next challenges nutrition research should address is to reduce food (and health) disparities, also by relying on a socio-ecological model aimed at improving the overall food environment, combined with more efficacious individualized interventions (5).

In this light, recent results from the Moli-sani Study indicated that a person from low socioeconomic status is unlikely to get the same heart advantages of a person with higher income, even in the case that they both similarly adhere to a Mediterranean-like model –and
get the same traditional dietary score-(6). This observation likely indicates that healthier choices are driven not only by a good set of knowledge and skills but also by greater financial resources. Nutrition literacy and communications are integral to improving diet quality, and health care professionals have an important responsibility to promote healthy eating habits, but often lack basic nutrition knowledge. Therefore, nutrition education and communication programs are recognized as a primary form of intervention in national food and nutrition plans, as they provide people with the knowledge and skills to make healthy dietary and lifestyle choices. Moreover, we should also consider that schools are the ideal setting for promoting healthy eating, because the habits of children and younger people are still being formed (7).

In 2016, an estimated 41 million children under the age of 5 years were overweight or obese, likely due to dietary risk factors including an increased intake of energy-dense foods and a prevalence of physical inactivity (8). The Moli-sani participants have been repeatedly informed by different means of the results of this thesis (e.g., newsletters, press release, yearly calendar...): in this way, we have ensured that the population involved in our study would consider research activities under a favorable light, thus continuing to collaborate with us and to take part in follow-up procedures.

We’re doing it on a regular basis through meetings (called ‘I campanili della salute’) extended to the general population and organized in different cities and small towns with the main aim of sharing the main findings and discuss the major health issues resulting from the Moli-sani study. A calendar is prepared each year and distributed free of charge to the families of all participants to the study, local general practitioners, public health officers and other selected people.

Within a context of research aiming to identify dietary determinants of health, it was interesting to analyze whether foods and beverages, some already well-known for their health advantages (e.g. coffee), but not included in the traditional Mediterranean Diet Score, nor in the majority of its modified versions, were associated with health outcomes in a population with typical Mediterranean dietary habits.

In this thesis, I observed substantial heart advantages associated with regular consumption of chili pepper (Chapter 7), a spice largely used in the Mediterranean tradition to add flavor to food but also contributing to an important decrease of salt use.
Based on the effects of high salt intake on blood pressure and on the prominent role of high blood pressure in promoting cardiovascular diseases, a population-wide reduction in salt intake could substantially reduce the incidence of cardiovascular disease (9).

Indeed, reducing salt intake has been identified as one of the most cost-effective measures Countries can take to improve population health outcomes. Moreover, government programs designed to achieve a 10 percent reduction in salt consumption over 10 years could save each year an average of 5.8 million disability-adjusted life years (DALY) (10).

Generally, the promotion of a healthy lifestyle would help reduce the healthcare burdens through lowering the risk of developing multiple chronic diseases, including cancer, cardiovascular disease and diabetes, and extending disease-free life expectancy.

Indeed, adherence to a low risk lifestyle was associated with a longer life expectancy at age 50, free of major chronic diseases of approximately 7.6 years in men and 10 years in women compared with individuals with no low risk lifestyle factors (11).

Similarly, in the Moli-sani Study, adherence to 4 healthy lifestyle factors, including Mediterranean diet, was associated with higher survival not only within the general population but also among patients at high health risk, such as those with history of CVD or diabetes and among the elderly (12).
CHAPTER 10. REFERENCES

1. https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases
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