

LETTERS TO THE EDITOR

The hesitancy in the nutritional prevention

L'esitazione nella prevenzione nutrizionale

Key words: Vaccine Hesitancy, Infodemic, Misinformation, Nutritional prevention hesitancy, Healthy Dietary Habits, Public Health Strategies

Abstract

Our letter discusses the concept of 'Nutritional Prevention Hesitancy', comparing it to the well-studied phenomenon of 'Vaccine Hesitancy'. Both hesitancies can be fueled by 'infodemics', the rapid spread of accurate and inaccurate information that can lead to public confusion and mistrust in authoritative sources. Drawing parallels between the two, the text highlights that nutritional prevention hesitancy can result in individuals not adopting evidence-based nutritional strategies, potentially leading to poorer health outcomes. The text emphasizes the critical role of diet in preventing diseases such as heart disease, diabetes, and certain types of cancer, and underscores the need for multifaceted strategies to combat misinformation and promote healthier dietary habits.

Sir:

in our previous letter (1) we pointed out the importance of inclusion of Nutritional Prevention, for the first time, into the Italian National Prevention Plan 2020-25.

Now, we wish to draw attention to the hesitancy in nutritional prevention, a field of science where there is currently no universally accepted definition and the research is weak. Therefore, with this letter we wish to raise awareness and advocate for conducting studies to better investigate this important issue.

Meanwhile, in an attempt to provide a first definition of hesitancy in nutritional prevention, it is necessary for us to refer to the concept of vaccine hesitancy, a well-referenced topic in scientific literature. Our aim is to contribute to further investigative work in this area.

The World Health Organization (WHO) defined Vaccine hesitancy as “delay in acceptance or refusal of vaccination despite availability of vaccination services. Vaccine hesitancy is complex and context-specific, varying across time, place and vaccines. It is influenced by factors such as complacency, convenience and confidence” (2).

Further insights can be gained from the article by David Adam, a London-based science journalist, published on 17 May 2023 in “Nature”, with the suggestive title “Can giant surveys of scientists fight misinformation about COVID, climate change and more?”. In his article Adam raises the question, shocked by the COVID-19 infodemic, of whether the various efforts launched to collect the consensus opinions of researchers are capable of improving public debate and decision-making.

An infodemic, namely the rapid and widespread dissemination of information, both accurate and inaccurate, about a specific topic, such as a disease or crisis, was notably used during the COVID-19 pandemic to describe the massive amount of information, not always correct, circulating about the disease.

An infodemic can cause confusion and misinformation among the public, making it difficult for people to distinguish accurate information from erroneous or misleading content. Additionally, it can contribute to the spread of conspiracy theories, fear, and panic. In a health context, an infodemic can also hinder disease response efforts, including prevention and treatment.

Managing an infodemic involves identifying and mitigating misinformation, promoting reliable sources of information, and educating the public on how to critically evaluate the information they receive. This task requires the involvement of a wide range of stakeholders, including governments, the Academy, public health organizations, media, and social media platforms.

The infodemic is one of the causes of vaccine hesitancy, which has several consequences, including the spread of preventable diseases, pressure on health systems, economic consequences (such as increased healthcare costs, loss of productivity due to diseases, and costs associated with the control of the spread of such diseases), increased mortality and morbidity, particularly among vulnerable populations such as the elderly, children and individuals with certain chronic health conditions, to name a few (3).

The question we can ask is whether the confusion generated by the infodemic played a role in vaccine hesitancy, could it also be a cause of nutritional prevention hesitancy? And what are the aspects that vaccine hesitancy and nutritional prevention hesitancy have in common?

The consequences of the infodemic on hesitancy towards nutritional prevention can be multifaceted. For instance, it can contribute to the proliferation of false or misleading information regarding nutrition and health. This misinformation can create confusion and cause individuals to question the validity of evidence-based nutritional prevention strategies (4).

The overabundance of conflicting information can lead to increased anxiety and fear. These emotions can contribute to hesitancy as individuals may feel overwhelmed or unsure of which prevention strategies they should adopt (5-7).

In an infodemic, it can be difficult to discern which sources of information are trustworthy. This can result in diminished trust in health authorities, nutritional experts, and scientific research, further fueling hesitancy (8).

If people are uncertain about what to believe, they may delay or avoid taking action. This could result in individuals not adopting recommended nutritional practices, potentially leading to poorer health outcomes (9-12).

Some individuals remain reluctant and skeptical about the potential role of diet in preventing certain chronic diseases. (13)

Although, a significant body of evidence underscores the importance of nutrition in preventing chronic diseases such as heart disease, diabetes, and various forms of cancer.

According to a 2017 review published in the *Journal of the American College of Cardiology*, there is strong evidence that a diet high in fruits, vegetables, whole grains, legumes, and nuts is associated with significantly lower risk of heart disease. In contrast, a diet high in processed meats, sugary drinks, and refined grains is associated with higher risk (14).

The World Cancer Research Fund and the American Institute for Cancer Research have stated that about 30-50% of all cancer cases are preventable by healthy lifestyle choices, including a healthy diet. The researchers suggest a diet rich in fruits, vegetables, and whole grains, and low in red and processed meats to reduce the risk of certain types of cancer (15).

The Diabetes Prevention Program (DPP) study showed that lifestyle interventions, including a healthier diet and increased physical activity, could significantly reduce the progression of type 2 diabetes in high-risk adults. The study found that the incidence of diabetes was reduced by 58% in the lifestyle intervention group compared to the control group (16).

If our question is more about the hesitancy people have to change their dietary habits even in the face of this evidence, that is a complex issue. Factors that influence dietary choices are multifaceted, including socio-economic factors, cultural preferences, food accessibility, knowledge about nutrition, and personal taste preferences (17).

Furthermore, a gap often exists between knowledge and behavior, meaning even when people know what they should do for their health, they may not always follow through (18).

A 2021 study in the *International Journal of Environmental Research and Public Health* found that health knowledge alone was insufficient to change dietary habits. The researchers suggested that interventions should also consider other factors, like improving cooking skills, enhancing the taste of healthy foods, and changing food attitudes (19).

In conclusion, in an era of infodemics the rampant spread of often misleading information can breed hesitancy in both vaccination and nutritional prevention, leading to potential public health issues. The parallels between these two types of hesitancy are striking, as both stem from an overabundance of conflicting information, causing confusion, mistrust, and fear.

Notably, the hesitancy towards Nutritional Prevention not only overlooks the solid body of scientific evidence

supporting the importance of a balanced diet in preventing diseases like heart disease, diabetes, and certain types of cancer, but also negates the economic, societal, and personal benefits of these preventive measures.

Addressing this hesitancy, therefore, requires multifaceted strategies. Most importantly, emphasis should be on enabling people to discern accurate and scientifically-backed information from misinformation, a key step in combating the negative effects of infodemics. It is only through these comprehensive efforts that we can encourage the adoption of healthier dietary habits and truly realize the promise of nutritional prevention.

**E. Alonzo¹, G. Bonaccorsi¹, G. Cairella¹, V. Carreri¹,
E. Guberti¹, D. Nucci¹, M.F. Panunzio¹, E. Valerio¹**

*¹The “Food and Nutrition” Working Group of the
Italian Society of Hygiene, Preventive Medicine and Public Health (SIItI)*

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Corresponding Author: Michele Fernando Panunzio, Coordinator of the Working Group "Food and Nutrition" (SIItI)
e-mail: michele.panunzio@aslfg.it