## salud mental

# Intersection of public health, nutrition, and mental health: Challenges to progress

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#### Citation:

Barquera, S. (2022). Intersection of public health, nutrition, and mental health: Challenges to progress. *Salud Mental*, 45(5), 211-212.

**DOI:** 10.17711/SM.0185-3325.2022.027



Proper nutrition is an essential part of healthy lifestyles and well-being. However, due to its multiple causes, malnutrition has become the factor that causes the greatest burden of disease in the world. Poor nutrition due to excess consumption of critical nutrients, alcohol, tobaco, and physical inactivity constitute the four main risk factors for the development of chronic diseases such as diabetes, cardiovascular diseases, cancer, respiratory, and liver diseases (Vos et al., 2015; GBD 2013 Risk Factors Collaborators, 2015; Murray et al., 2015; Gómez-Dantés et al., 2016). To date, no country has succeeded in reducing the growing prevalence of overweight and obesity that have progressively dominated the epidemiological panorama of middle- and high-income countries in the past four decades (Ng et al., 2014; Barquera et al., 2020b).

Eating patterns worldwide, particularly in developing countries, have been significantly transformed to the detriment of individual and global health. Centrally manufactured, ultra-processed, and packaged edibles have largely replaced the natural, local, and fresh foods that humanity has lived off throughout its evolution. These products contain ingredients that are harmful to health and others whose effects are still unknown (such as sweeteners, flavorings, aromatizers, texturizers, and colorants), as well as substantial amounts of added sugars, fat, and sodium. Mexico is one of the countries that consumes the most ultra-processed foods, estimated to account for over 25% of caloric intake. One of the products of greatest concern are sugary drinks (such as soft drinks, juices, sports drinks, and energy drinks), whose consumption contributes 70% of added sugars in the Mexican diet. They constitute the most widely consumed product associated with weight gain, the onset of diabetes and cardiovascular diseases, and other health problems such as fatty liver (Sánchez-Pimienta, Batis, Lutter, & Rivera, 2016). It is estimated that approximately 40,000 deaths each year are associated with the consumption of sugary drinks in Mexico (Singh et al., 2015).

One of the main components of population well-being is mental health. Chronic diseases directly affect mental health due to their long evolution and impact, representing one of the most common complications and largest burdens of disease and financial costs. Mental health disorders can also complicate nutritional status, as in the case of chronic depression or eating behavior disorders, in which the resulting changes in energy intake and expenditure have severe consequences that may require complex interventions.

There is a broad consensus on the role of the food environment as the main factor responsible for the difficulty in maintaining healthy lifestyles, which was previously attributed to exclusively individual choices. Acknowledging this has made it possible to identify a series of cost-effective, population-level interventions that can have a major impact on human, population, and global health. These interventions include: 1. fiscal measures (such as taxes on soft drinks and junk food and subsidies to improve access to healthy food consumption), 2. interventions in and around schools to eliminate access to junk food and their advertising strategies targeting children (including all kinds of sponsorships) and encourage physical activity, 3. a front of package labeling system that makes it easy to identify junk food and make healthier choices, 4. restrictions on the promotion and advertising of junk food at sales outlets and all types of media including digital ones,

5. promoting healthy food guidelines, 6. investment to ensure better access to free drinking water and 7. shielding research, education, and policy design from the interference of the industry that manufactures these products (Popkin et al., 2021). These and other measures are intended to facilitate healthy choices. It is worth mentioning that an additional benefit of regulating the use of public figures, celebrities, and declarations in junk food advertising is the elimination of strategies that create pressure and anxiety in consumers, specifically women and girls (for example, by using thin models to promote high-calorie foods, or declaring their potential usefulness for weight control when they have excess calories) and may be associated with an increased risk of eating disorders.

One of the most significant challenges to achieving greater progress in preventing and controlling poor nutrition may be interference from industry, which produces junk food and has hundreds of thousands of dollars more than whath the state has to promote healthy eating. These companies have employed strategies to delay policy implementation, financed academic groups that support their products, and sponsored educational events aimed at health professionals, in addition to their advertising directed at the general public (Barquera & Rivera, 2020). A new trend has recently been documented, whereby these companies partner with influencers who divert attention from the harm caused by their products. This minimizes the importance of their health impact and bends the discourse to link it with movements such as feminism, racism, and weight stigma, to encourage the continued consumption of their harmful products. This strategy seeks to polarize health professionals and other groups interested in the issue. To cope with these challenges, it is essential to strengthen public health ethics, to declare conflicts of interest, and to utilize a gender perspective to address all causes of the malnutrition problem (Barquera et al., 2020a; 2022).

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