

## The Escalating Health Threats from Ultra-processed and High Fat, Salt, and Sugar Foods: Urgent Need for Tailoring Policy

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With its colonial past, and a glaring problem of poverty and hunger, India oft fails to acknowledge a new, rapidly growing problem of overnutrition. With the economic boost and entry of various foreign players from the food industry, Indian citizens have been increasingly exposed to ultra-processed, high in sugar, salt and fat foods (HFSS foods). The last decade or so has seen an exponential rise in the consumption of such foods, leading to increasing prevalence of overweight- and obesity-related illnesses like diabetes, hypertension, etc. In this scenario, examining the efficacy of policy-related measures in reducing consumption of these harmful foods and preventing the associated health issues is paramount. Across the globe, several countries have explored options from taxation on HFSS foods to restricting marketing to children, as well as different practices for front of the pack labeling. In the context of India and its increasing burden of preventable, diet-related illnesses, the urgent need of instituting these preventive policies at national scale cannot be neglected.

**Keywords:** Fast food, Front of pack labeling, Junk food, Obesity, Sugar-sweetened beverages.

The economic degradation of the Indian sub-continent by several colonial powers was so extreme that it permeated the metamorphosis of independence. The poverty and hunger cycle also took roots in the soil of free India, and the minds of free Indians. And not without reason – according to a Food and Agriculture Organisation report in 2020 [1], 189 million people are undernourished in India, out of a total 746 million globally.

In this historical and current context, it is easy to lose perspective on the rapidly escalating health crisis posed by overnutrition. The number of overweight or obese people in the world has risen to 1.9 billion, while 462 million are underweight. Admittedly, this imbalance skews the other way in children under five, where 45 million children are wasted and 149 million are stunted, compared to near 40 million who were overweight or obese. Yet, it is also true that the low-income and middle-income countries with the highest burden of undernutrition are witnessing swift growth in childhood obesity and overweight [2]. Despite overnutrition being a global issue, there is major inequity when it comes to the readiness of different nations and regions to deal with it.

### THE THREAT

The world over, the menace of non-communicable diseases is growing. As per 2021 estimates, they result in death of 41 million people each year, contributing to 71% of

deaths globally. Almost three-fourth of these deaths happen in low- and middle-income countries. Children and adolescents are also not exempt from this onslaught and remain vulnerable to obesity, metabolic syndrome, hyperglycemia, hyperlipidemia, hypertension, and diabetes [3]. Contribution of ultra-processed foods, especially consumption of high amount of fats, trans-fats, salt, and sugar to these ailments is now well recognized. The recent Comprehensive National Nutrition Survey (CNNS) under the aegis of Ministry of Health and Family Welfare has documented a prevalence of overweight higher than the national average in 22 Indian states and more than 10% in at least four of them, namely Tamil Nadu, Goa, Delhi, and Arunachal Pradesh [4]. One in 10 schoolchildren is pre-diabetic, 5% adolescents are hypertensive, and 7% are at risk of chronic kidney diseases. Of greater concern is the finding that “metabolic obesity” (either dysglycemia or dyslipidemia) was evident in at least half of the children aged 5-19 years, including in those who were thin or stunted, or conventionally labelled as undernourished [5]. Importantly, triglyceride, glucose and HDL abnormalities were higher among the poor. Thus, the menace of overnutrition has permeated in at least half of the children and adolescents in India, and the threat is being substantially underestimated based on the conventional anthropometric yardstick.

To curb the threat of food-based health abuse, the Indian Academy of Pediatrics released its guidelines on

unhealthy foods and coined a term JUNCS to identify all such foods and beverages under a single umbrella [6]. This nomenclature encompasses junk food (food high in fats, salt, and sugar, also termed as HFSS) [7]; ultra-processed foods (as per Nova classification) [8]; nutritionally inappropriate foods (by virtue of culture or social practices); caffeinated, colored, and carbonated drinks/foods; and sugar sweetened beverages (SSBs).

Detrimental effects of HFSS diets and ultra-processed foods are now well recognized. A recent systematic review of 43 studies comprising of 891723 participants has demonstrated a robust association of intake of ultra-processed foods with dyslipidemia and metabolic syndrome in adolescents [9]. Another narrative review reported on association between consumption of ultra-processed foods and cardio-metabolic risk [10].

### Factors Facilitating Growth of HFSS and Ultra-processed Foods

The speed at which the food industry has grown in India is alarming. At the beginning of the last decade, in the year 2012-13, the reported worth of the fast-food industry was 3400 crores, that was expected to double by 2015-16 to 7000 crores [11]. The ferocity at which the volcano of HFSS foods has erupted can be linked to aggressive marketing, global connectivity, urbanization, and a rise in disposable income.

The advent of social media and networking sites has opened a new avenue for children to be specifically targeted. Both Facebook and Instagram have an age restriction only up to 13 years of age. Targeted advertising to adolescents is a proven marketing strategy of acquiring life-long customers [12]. HFSS and ultra-processed foods are addictive by virtue of being hyperpalatable, and as we have already learnt in the case of nicotine addiction, the ban of advertising to children does not necessarily mean that they are not exposed to such advertisements anyway.

Increased peer pressure to look 'cool' and 'hip' on social media, associated with self-esteem, confidence, and self-worth, has rendered our children susceptible to being influenced. Moreover, nationally known celebrities have ceded some of this control to social media influencers, who may command smaller groups of followers, but due to their availability, access, and personal involvement, may be more effective in shaping their followers' choices. It is important to note also, that some of these influencers predominantly have teenagers in their audiences, offering easy access to HFSS-producing companies to reach them via paid sponsorships, advertisements, and brand collaborations (marketing strategies). In future, it will become harder to isolate and identify online content, which is discreetly promoting unhealthy behaviors in children.

## FORMULATING AND IMPLEMENTING POLICES

The battle is not just in the formulation of policies, but in enforcing them as well. The first step; however, is the formulation. The need of the hour is to enable front of the pack labeling (FoPL) on HFSS and ultra-processed foods, making it easy to understand the risks involved with consuming them. Along with it, uniform policies are needed to identify these foods and make aware not only its intended customers, but the various institutions that legislate, execute, and enforce said policies. For instance, in the public interest litigation (PIL) filed by a Delhi-based NGO, the Delhi High Court faced difficulty in defining junk food, as the food industry, represented by the All India Food Processors Association, National Restaurants Association of India, and Retailers Association of India argued that 'junk food' is not defined as such by the food safety law and that there is no justification to formulate a special category called junk food by the court [13]. The PIL had sought to ban the sale of junk food and carbonated drinks in and around the schools and within a 500 yards radius of school premises, as well as a ban on junk food advertisements aimed at children.

The school is one of the primary places where a child may first experience a degree of autonomy when it comes to making decisions about what she or he consumes. It is thus important that certain checks are in place to ensure inculcation of healthy eating practices. Brazil and Australia have been leading the way, the former with its 'school health program' promoting good eating habits, and the latter with its color-coded food options at the school canteen [14,15]. In Australian schools, foods coded 'red' are 'not recommended', 'amber' indicates 'select category', while 'green' denotes the foods that should be eaten every day. The 'red' foods are present in the menu only twice a term, while the 'green' ones must always be available. In the final judgment of the Delhi High Court on the PIL [13], it directed all schools to implement a system like the color-coding mandated for Australian schools. Although this would be a good start, monitoring systems to ensure continued adherence are sorely needed. Some of the possible strategies are listed in **Box I** and discussed below.

### Nutrition Warning Systems

In a developing country like India, with a major chunk of its

#### Box I Addressing the Threats from HFSS and Ultra-processed Foods

- Nutrition warning systems
- Taxation
- Marketing restrictions
- Consumer involvement
- Awareness

population still illiterate, easily understandable food labeling is critical for behavioral change at a national scale. Studies suggest that nutritional warning systems (NWS) should help the potential consumers to choose healthier options at the point of purchase. Many such like the 'key hole' symbol in Sweden, Norway and Denmark indicating nutritious food, or the 'traffic light' labeling system in the UK indicating high (red), medium (yellow) and green (low) HFSS content in food, or Australia's 'Health-star rating' system, are already in use [15]. National figures have an important role to play: for instance, the USA's 'facts up-front' NWS was developed as a response to the First Lady, Michelle Obama, calling on the food industry to help Americans choose a healthier diet [16]. In India, so far, no concrete policy has been put in place yet to help its populace decipher the complicated numbers and percentages of nutrients listed on the label of an HFSS product.

Compulsory front of the pack labeling (FoPL) has been suggested as an important strategy to reduce the consumption of ultra-processed foods [17]. The four FoPL formats followed by most countries are described below:

- i) *The traffic light system*: Used in the UK, Iran and Sri Lanka, it gives traffic light-like colors for salt, sugar, fats, and saturated fats. Green means low, amber means medium, and red means high. It might, however, be misleading for the consumer at times, when a product is simultaneously green and red for different harmful nutrients.
- ii) *Summary indicators*: Used in the New Zealand, Australia, France and Belgium, it gives a single, comprehensive indication for overall nutrition in a product, which might be alphabetical (A to E) or numerical (0.5 to 5). This is quite susceptible to industry manipulation, as the rating can simply be improved by adding positive nutrients, which do not in any way reduce the harmful effects of the negative nutrients.
- iii) *Reference intake or guidelines daily amount*: These indicate the amount of caloric intake and nutrients in percentage points of the recommended daily intake per serving. Followed by Malaysia and Thailand, it is also adopted voluntarily by the industry in many countries. It is basically a simpler version of the detailed nutrient list provided at the back but is still too difficult to understand for the layman.
- iv) *Warning label system*: This is increasingly being viewed as the current best practice, provides easy-to-understand, and nutrient specific warnings. Peru and Chile employ a version of this system, wherein the warning simply states 'high in sugar', or 'high in saturated fats', etc. on a solid black background. On the

other hand, Israel uses pictorial icons within their warning labels, for 'high sodium' (a saltshaker), 'high sugar' (a spoonful of sugar), 'high saturated fats' (bread being buttered). In India, the Breastfeeding Promotion Network of India too, has recommended the use of pictures rather than numbers to convey these warnings.

In 2020, a study commissioned by the Food Safety and Standards Authority of India (FSSAI), reported that among 1300 packaged food product samples, only 4.4% adhered to the limits on fat, sugar and salt placed by the WHO. It meant that 95.6% of the products failed on at least one critical nutrient component. These WHO thresholds categorize what products on the market would be required to have FoPL warnings, for the purposes of reducing overweight and obesity and resultant health issues by reducing the consumption of HFSS foods. However, an FSSAI Working Group has considered dilution of these standards for some foods in the Indian context [18]. We caution against the dilution of WHO thresholds, as the formulation of FoPL warning systems could become redundant unless these adhere to the strict, global standards in enforcing them.

The FSSAI should urgently consider adapting and adopting the Nova classification of foods and define ultra-processed foods in the Indian context. This is the first essential step to develop relevant regulations to curb their sales.

### Taxation of HFSS and Ultra-processed Foods

Another important area of policy-making includes taxation of HFSS and ultra-processed foods. Even though there is a dearth of real-world evidence for success of taxes on consumption of unhealthy ultra-processed or HFSS foods, several nations have tried one or the other version of it. The results, so far, have been inconsistent. In 2011, Denmark had enacted a 'fat tax' on products containing more than 2.3% saturated fat [19]. Before it could also introduce a similar, proposed 'sugar tax', the Danish Tax Ministry backtracked, and abolished the 'fat tax'. The state had discovered that instead of behavioral modifications in consumption, all they had managed to do was encourage consumers to buy high fat goods from across the border. On the other hand, Mexico's 'soda tax', implemented in 2014, of 1 peso per litre on sugar sweetened drinks proved effective [20]; the probability of converting to a non-consumer of these products amplified by 4.7 percentage points, and of being a low consumer (consuming less than 355 mL a week) increased by 8.3 percentage points. Meanwhile, India's own 'fat tax' implemented by Kerala, a 14.5% surcharge on junk food served in branded restaurants, has been too arbitrary to affect dietary habits [21]. Despite these mixed results, among the comprehensive

umbrella of policies in this regard, taxation, even as a limited pilot project, is worth a serious consideration. It is heartening to observe that the Goods and Sales Tax (GST) Council of India has announced that the category of “Carbonated fruit beverages of fruit drink” and “Carbonated beverages with fruit juice” will be levied 28% GST with additional 12% as compensation cess [22].

### Marketing Restrictions

World Health Assembly has endorsed a set of recommendations by the World Health Organization that countries should take steps regarding prevention of advertising unhealthy foods rich in added sugars, trans fatty acids and saturated fats, especially in places that cater to children. There is also a need for restrictions on advertising and marketing of fast food and ultra-processed food in schools, and on television and other media. Use of promotional offers, toys, celebrities, and cartoon characters to market food to children must be strongly prohibited. With the easy availability of online food shopping, there needs to be a restriction on ordering certain items by younger children.

### INVOLVE THE STAKEHOLDERS

Even though the formulation of tailored policy is paramount, the involvement of key stakeholders, the consumers, especially children and their caregivers, will go a long way in reducing the consumption of HFSS and ultra-processed foods. It is important that only those stakeholders and policymakers be involved who do not have any potential conflict of interest with the food industry. The environment around the children and their parents needs to be conducive towards making healthier food choices. From the home to the school, to the various avenues of marketing, a comprehensive push towards the minimally processed food is the need of the hour. For instance, Australian school curriculum is prioritising education on food and nutrition, increasing levels of consumption of healthy foods in school canteens, vending machines, sports clubs, etc. [22]. The spending power of a child, usually desired from the spending power of the parent, needs to be considered as well, especially in a developing economy like India. More stress on balanced meals with only recommended amounts of fat, sugar, and salt, is needed in national schemes like the Supplementary Nutrition Program or Midday-meal scheme (PM-POSHAN), which currently does not focus on simultaneous threat of overnutrition.

### CONCLUSION

We are in a quasi-pandemic of sorts – No, not *that* one, the *other* one; slow-moving, non-infectious, non-communicable. A pandemic of over (and inappropriate) nutrition. The

major difference between it and the COVID-19 pandemic is that we are better placed to fight the latter. For the former, we have no vaccine, no general awareness, and above all, minimal political will to eradicate it. The Catch-22 situation here is that to create political will, citizens must be made aware of the grave risks associated with the HFSS and ultra-processed foods, and to create such widespread awareness, political will must be strong enough to result in legislation and policies that enable various nutritional warning systems. This is a self-contained circle that allows both parties to be complacent.

The inertia needed to break out of this must come from national-level policies from the government (read FSSAI). If left to their own, the fast-food industry serving these ultra-processed and HFSS foods cannot be expected to self-regulate and act against their self-interest. Alternatively, waiting for public opinion to organically catch up to these dangers via global osmosis will result in either poor quality or loss of lives due to the inevitable time-lag. This can only be averted by being proactive and urgently formulating tailored national-level policies.

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