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Research Article

Indigenous Foods: Resilience against Emerging Diseases

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ABSTRACT

The harmful effects of processed food have seen a worldwide increase in the number of people falling prey to lifestyle-related diseases. The latest in the row of diseases striking humans has been the deadly COVID-19, which also we would like to critique as a consequence of reduced immunities besides compromised health and sanitation restrictions being exercised. Ironically, Indigenous people, despite their greater challenges with the natural elements, lower levels of infra-structural and medicinal access, we're able to garner their coping mechanisms to curb death counts in their communities. It was observed that support groups at the village level emerged along with traditional food choices as well as them choosing holistic ways of healing. This paper is an attempt to the forefront the idea of 'going back to basics along with our modern-day lifestyles, dietary preferences, and food consumption patterns.

Keywords: *Traditional knowledge, Indigenous food, Ayurvedic diet, antiviral, COVID-19, Social practices, Commensality*

Background

It has always been an established and researched fact that local, traditional knowledge, practices and community-driven resilience have helped protect Indigenous families and communities around the world from the more virulent dimensions of diseases, including COVID-19. It would not be a surprise if some of them would not even have heard of this disease. A significant factor emerging from such evidence is that community-driven and controlled public health actions were crucial in keeping this demon at bay. Investigations have even revealed that 'isolation' was a time-tested

practice for some Indigenous communities that had increased significance as well as preparedness to tackle the pandemic last year. Many communities provided separate spaces for individuals to self-isolate by living on the land or in housing within the community for people who were isolated. Self-identification as indigenous or tribal is usually regarded as a fundamental criterion for determining indigenous or tribal groups, sometimes in combination with other variables such as language is spoken and geographic location or concentration (UNDP, 2000). Using kinship practices and traditional ways of caring, Indigenous peoples took care of

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family and community members, including giving special attention to elders, children, those with health concerns and those in quarantine. What was adopted by Indigenous communities in Canada and even globally was an increasing trend towards the promotion of their respective culture-driven-strengths-based approach (Belita et al, 2020).

There have been studies related to 'going back to basics with regard to food consumption. Deon Ben who worked for the Grand Canyon National Park's vegetation program wrote about "Fourteen Puebloan Food Experience" chosen from across the north of New Mexico (Ben, 2016). Applying 'Sociological Imagination' as conceptualized by Mills (2000) to the dynamics of food and society, there was empirical evidence of improved health parameters especially amongst those who went 'back to the basics' in their food choices and eating habits for three months (Carolan, 2016). They eliminated all pre-European contact foods which contained sugar, alcohol, wheat, beef, chicken, etc. They even did away with chilies which used to be a staple component of their diets and very tough for most modern New Mexicans to live without. The project was based on the premise that the key to good health for Native people might lie in eating what their ancestors ate. It has been observed very regularly that many people, who live in cities and even semi-urbanized places, happen to have more issues related to heart disease, cholesterol, obesity and diabetes.

Not only are people feeling the need to recognize and appreciate the contribution of traditional cultures and indigenous knowledge systems, but many communities, as well as support groups, are also promoting the preservation of indigenous foods and values pertaining to how and when to eat the same. Weaving the same within mythological narratives enhances the social acceptability of some nutritious food items, besides giving them a sacred flavor. Linkages of diet to physical and mental health have always been established and the closer it is to its raw unprocessed form, the greater are the chances of its nutritional and health values being intact. "You are what you eat" is an age-old saying that has been translated to medical trials, showing greater physical energy as well

as mental alertness as evidenced after three months of the 'back to basics' diet administered to Pueblo communities.

We need to also analyze food consumption and eating as a social practice – as a practice that is inseparably connected to routines of food preparation, cooking, and meal habits. We have attempted to decipher what exactly eating as social practice means and, thereby analyze facilitating and impeding factors for fruits and vegetable consumption. In 1910, Georg Simmel published the essay "The Sociology of the Meal", which was one of the first sociological works on meal cultures and is still one of the basic readings in Sociology of Food. According to Simmel (Simmel, 1997), eating and drinking are, on the one hand, the most communal thing, which humans share and on the other hand, it is the most egotistic human act because what an individual eats can under no circumstances be eaten by another person. His essay discusses qualitative methods (participant observation, in-depth interviews and focus group discussions), commensality of eating and its huge "socializing strength" as well as the organization of a meal, which became, in his opinion, more socialized and aesthetically stylized over time. Simmel had opined that the social act of eating food is expressive of a dialectical relationship between nature, related to survival, as well as the domain of culture in which this survival manifests itself. When eating becomes a 'sociological' occasion, it is transformed into something that is both more regulated and more 'over the individual.' According to Symons (1994), sharing a meal with other persons is the initial and significant step for overcoming the 'naturalism' of food.

The interconnection between eating, discipline and distinction also plays a somewhat important role in the writings of French structural anthropologist Lévi-Strauss. A key question in his work is the transformation from raw food to cooked, from nature to culture, which is clearly linked to processes of disciplining. Figure 1 depicts Lévi-Strauss culinary process of transformation in the so-called "culinary triangle"-model. Many food choices, as well as taboos, are somewhat regulated by ecological and material factors and it has been researched

that all food-related norms and institutionalized practices are influenced by specific cultures, including totemic or even aesthetic types

of symbolic rationalizations (Mäkelä & Arppe, 2005; Counihan & Van Esterik, 2012).

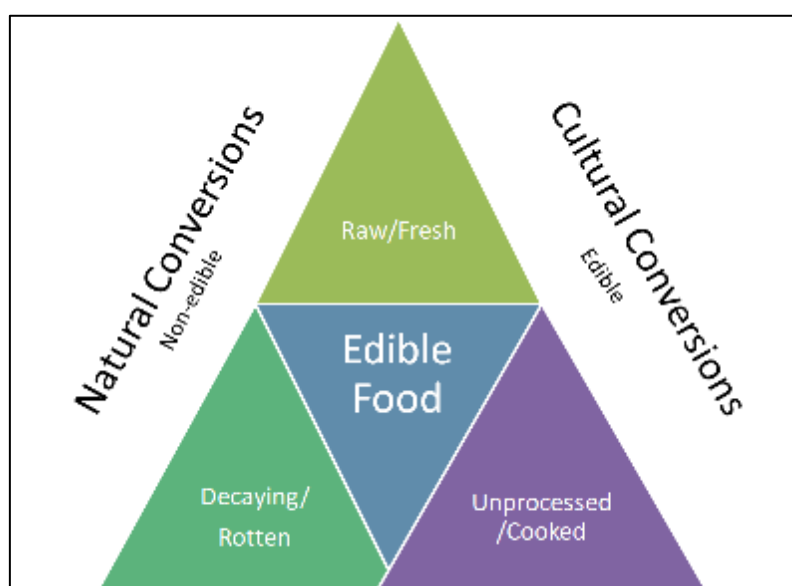


Figure 1. Lévi-Strauss's "culinary triangle"-model depicts how cultures moved from their original "raw" foodstuffs to "cooked" or "rotten" conditions through cultural transformations.

The inner triangle illustrates the opposing pairs of nature vs. culture. Further, he includes different states of food, and the degree of elaboration: cooked, raw, rotten. Lévi-Strauss draws our attention to the structural side of food and surmised that foodways would have such structures, akin to grammar and that one could isolate rules regarding food consumption, just as one can state rules for changing an English verb into various forms according to their tenses (Lévi-Strauss, 1966). According to him, the culinary triangle of the raw (not interfered by cultural transformation), the rotten, and the cooked was representative of a semantic field within which the various forms of transformation of food from nature into culture play a key role. Since Strauss's analysis, the notion of cooking, including producing, processing, combining, and consuming has become highly diversified, and even contentious. Levi Strauss identified the almost diametrically opposed understandings of culture and nature by looking at boiled versus roasted food, a kind of identifying marker of respecting food by those societies which would do the least harm to their food. Conceptualizing food in the form of

"raw," "rotten" and "cooked" takes us to the domain of culturally constructed metaphors and ideas. So for Strauss, "Cooking is a language, through which society unconsciously reveals its structure." Cultural norms and taboos might manifest through culinary and commensal practices, as when we bake our most elaborate pastries for special occasions, or when we avoid eating food that drops on the floor as it has gone closest to the zone of the rotten.

Margaret Mead's (1970) description of a society that has a 'disease of affluence and has seen the rise of commercial agriculture is also relevant here. For Mead, the ethical problem was how so many people with so much could ignore so many people with so little. If we reflect, it is true that some countries eat more than their requirement, while others grapple with their utter state of hunger. When food is treated as a commercial activity then it loses its primary significance and land is mined instead of replenished and conserved'. This has bearings for our contemporary times where indigenous food items also gain social significance and acceptance when they are marketed well and sometimes furiously patented (Nasser,

1988). Once in that trap, McDonaldisation of food as the industry takes over, throwing most ethics and environmental concerns to the winds (Ritzer, 2013).

Another anthropologist who follows this approach and who significantly influenced food studies is Mary Douglas (1972). For her, eating is akin to talking and is as much of a patterned activity and the daily menu could be compared with linguistic forms. Thus, for her, sharing meals is an expression of social relationships and a practice of inclusion and exclusion (Fardon, 2002). Bourdieu, a French cultural anthropologist, offers a detailed explanation of how dispositions, preferences and tastes influence our consumption and how they are related to social status (Bourdieu, 1984). These dispositions towards food are the result of our habitus; they are influenced by our social position and the social context within which we experience everyday life. The term habitus refers to particular norms and values, predispositions and preferences as well as lifestyles, which are embodied by socialization, daily practices and experiences. In this context, it becomes clear why Bourdieu translates this concept to food consumption: Distinctive food preferences differ because of different socialization, as well as class, gender, or status-based mechanisms. It is taken for granted that the propensity to share food with others shapes how, and what we eat. At a very young age, we learn what to eat from our parents, and over the course of our lives continue to take cues about what to eat from those around us as well. Simultaneously, distinctive food preferences and consumption habits are also an expression of belonging to a group. As consumption habits shape an individual's identity, they can be understood as a way to establish and internalize the social codes of behavior of a specific group/identity. Due to its routinized nature and its continuous repetition, a practice may formulate itself into a social structure and needs to be comprehended through practices of food cooking and eating practices that are deeply socially embedded.

In many societies, eating is done as a social activity in a social context. The procurement, distribution and sharing of food and related social regulations are the basis for much of social organization in human societies. Food and

cooked food are different from each other in a major way. Food has a universal value to the extent that it, as a substance, becomes an essential need for the very survival of all the organic bodies: plants, animals, and human beings. It acquires specific importance when looked at from the point of view of human beings. Unlike plants, human beings require a particular kind of food for their very survival. They require, in most cases, food grains as a primary condition. Thus the denial of food would jeopardize the very survival of human beings. Hence, food even falls into the realm of human rights (Guru, 2009).

Problematizing the conceptual understanding of food security, we wish to demonstrate that it means not only to secure the availability of food, but it also attempts to locate the problem within a macro-level understanding, embedding it with routinized daily practices of buying, cooking, sharing as well as awareness and discussions on the material (water, energy, land, seeds, soil) and non-material (knowledge, social norms, cultural values) dimensions. The same applies to the resistance to eating indigenous foods by urban dwellers. Daily routines, knowledge, perceptions, and other internalized factors that are materialized in the consumption of exotic vegetables can hinder a change in multiple ways. We need to investigate consumption orders and to suggest ways how to restructure them, where there needs to be a radical revival of raw fruits and vegetables, healthy options of eating and cooking rather than the usual rat race for vicarious consumptions (Lugo-Morin, 2020).

Traditional Indian Wisdom

The traditional methods of processing food, its preservation techniques, and their therapeutic effects have always been acknowledged in India. What has wide acceptance is that food systems can deliver numerous biological functions through dietary components in the human body which makes them more functional due to their body healing qualities, which include antioxidants, dietary fibers and probiotics. These functional molecules help in weight management, maintaining sugar levels as well as building general immunity of the body.

What we need to appreciate is that our ancestors had different foods that were healthy and nutritionally strong. Dating back to Indian civilizations and Indian mythological belief systems, including Bhagavadgita and Ramayana, different communities that reside in India have had unique and institutionalized ideas plus values about food. In the Vedic period, knowledge, prayers, religious songs, and poems were written, which came to be known as Vedas. The Vedas, an important component of religious texts in Indian literature describe different cereal grains and their use in the daily life of Indians. Aryans believed that food was not simply meant for eating or nourishment of the body, but was crucial for even the moral and mental dispositions of people, contributing to their overall personality development. Banana, for instance, is a delicious fruit used in India mostly as Prasada, another term for sacred food. Not only does it have high calcium and potassium components, but it also neutralizes acidic conditions in the body and is recommended to people suffering from anemia. So a food item that has a sacred significance is actually a strong medicinal fruit too. For restoration of the balance, dietary recommendations are given according to the individual's body constitution (Vata, pitta, or Kapha) (Sarkar et al, 2015). These are different recommendations that have been given according to Ayurvedic categorizations of different body types. According to such a taxonomical understanding those with 'Vata' type of body constitution, can have cooked rice, wheat, a moderate amount of pulses, quite a few vegetables, use most spices, and are allowed to have most nuts and oils, albeit in moderation. They are supposed to avoid white bread and uncooked salads. Those with Pitta constitution are allowed to have rice, wheat, legumes, and leafy vegetables but should avoid sour food items or strong spices. Those who are identified with the Kapha constitution are expected to avoid fried food, all nuts, dairy products, and even soy-based food. They can consume raw vegetables and fibrous fruits.

It has been observed that traditional foods consumption tends to be higher in communities that are located in remote areas. Tradi-

tional foods are crucial for the health and culture of Aboriginals as well as other small-scale communities across the globe and significantly contribute to physical, social, and spiritual well-being. Harvesting and preparation activities or working in fields, farms, or near the coast, enhance a community feeling and even facilitate maintenance of social relationships, easy knowledge transfer besides sustaining spiritual connections with the land, including flora and fauna (Béné et al, 2021).

You are what you eat

The perception that 'you are what you eat' seems universal. It holds that, when absorbing a food, a subject absorbs at the same time salient features of the food (Murcot, 1986; Fischler, 1988; Nemeroff & Rozin, 1989). If eating food makes one become more like that food, then those sharing the same food become more like each other. The most fundamental form of food sharing is probably the provision of nourishment through the mammalian link. Essentially, separation from the mother's body is temporarily compensated for by nursing and caretaking. Then the child is increasingly socialized into the family and into society at large. Families undergo a slow gradual process of separation if not dislocation. Commensality preserves revitalize, builds up kinship, or creates artificial kinship. They temporarily restore loosened links of kinship. Also, they bring together households that were dissolved or disseminated with the passage of generations/offspring marrying away.

Much of the health-policy effort to improve people's nutrition has been based on the implicit assumption that information about nutrients, energy, and exercise delivered to each and every individual should be able to optimize behavior. But thinking of food and eating in terms of nutrients and responsible individual choice does not seem to be helping much. If anything, the spread of obesity seems to point to the opposite, that it actually makes things worse, apparently contributing to privatizing, de-socializing and individualizing the relationship to food and eating. Public health policies have long been aimed at individuals, urging them to change their behavior and make 'rational healthy choices'. In the domain of nutrition, this

may have produced quite a few unexpected, even unwanted effects.

Fruits and vegetables provide a diversified, flavored, colorful, tasty, low caloric, and protective, micro-nutrient-rich diet. Overall it is estimated that low intake of fruits and vegetables is attributable to approximately 2.7 million (4.9%) annual deaths, 11% of stroke, and 19% of gastrointestinal cancers and is still significantly associated (protective) with lung/pharyngeal/laryngeal/oral cancer, type-2 diabetes mellitus, bone-health, vision/cataract, and micronutrient deficiency state (Sachdeva, 2013). Fruits and vegetables (FVs) are recognized as healthy constituents of diet and a sustainable

solution to the existing twin burden of micronutrient deficiencies and non-communicable diseases in developing and developed countries. In general, FVs are nutrient-dense foods low in energy, containing varying amounts of vitamins and minerals including carotenoids, vitamins B, vitamin C, iron, zinc, potassium, calcium, magnesium and fiber. These are abundantly rich in bioactive molecules like phytochemicals and polyphenols that function as antioxidants, anti-atherosclerotic and anti-inflammatory agents (Krishnaswamy & Gayathri, 2018). Figure 2 shows the nutrient and color classification of FVs and these nutritional qualities highlight the importance of FVs as a component of the daily diet.

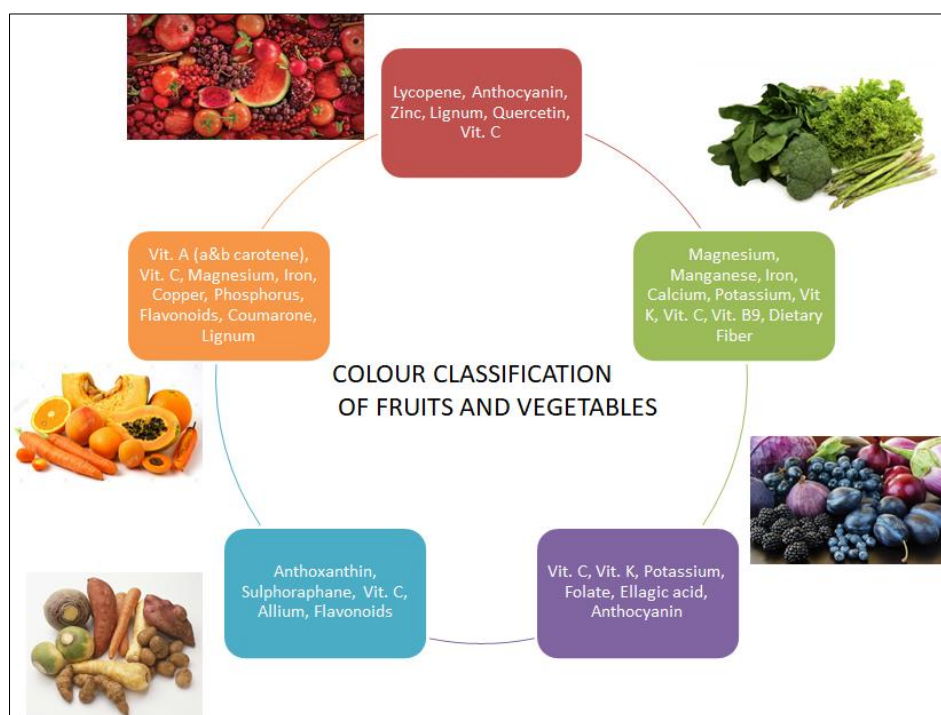


Figure 2. Colour classification and nutrient composition of fruits and vegetables.

Ayurvedic Diet and Diseases

Ayurveda not only deals with the diet plan since its main principles say 'heal/cure through proper diet and exercise'. In Ayurveda, diabetes is known as Madhumeha, where Madhu refers to sweet and Meha refers to urine excretion, i.e. excretion of sweet urine. There are many plants that demonstrate positive effects against diabetes such as *Abelmoschus moschatus*, *Acacia arabica*, *Achyranthes aspera*, *Achyrocline satureioides*, *Aegle marmelose*, *Allium cepa*, *aloe vera*

etc. The ayurvedic system has different diet plans for diabetic patients. Foods that possess astringent or bitter taste help in reducing diabetic effect for instance Jamun (*Eugenia Jambolana*) and or Karela (*Momordica charantia*) which are high fibre foods and ethnobotanic plants native to India (Chakravarty, 1959).

Our traditional food intakes are based on regular and strongly endorsed use of tulsi (basil) and pudina (Mint) leaves, turmeric, ginger, black pepper, cinnamon, cumin, coriander

and other Ayurvedic herbs and spices which help boost the body's immunity and ability to fight diseases (Bagad et al, 2013; . Zahra et al, 2020). Eating organically-grown fresh vegetables and fruits is another practice for keeping good health. Eating some specific food items such as Til (sesame seeds) in improvised versions like Tilkoot or Gajak during the winter season also aid maintenance of sound health immunity. The use of gur or jaggery as a sweetener, compared to refined sugar is directly linked to significant health benefits. The practice of putting Neem bark in an earthen pot with water and drinking that water for a few days in the month of Chaitra is also known to strengthen immunity. Eating food on 'Pattal' or fresh banana leaves is also a healthy tradition. The use of mitti ke bartan or earthenware is considered highly advantageous. Furthermore, drinking water stored overnight in a Tamba (copper) pot is beneficial in maintaining good digestion. The ancient ritual of taking dip in the clean water of the Ganges, the Godavari and other rivers before sunrise is relevant even today for cleaning the body. Bathing in natural Garam Kund (hot springs) is also beneficial for us. Offering water to the Sun in the early morning is another practice that provides significant health benefits. The tradition of worshipping nature motivates us to protect it for maintaining a clean, green and healthy environment.

The rich diversity of Indian culture, climate and cropping practices has led to popularity as well as consumption of some foods as per respective regional preferences and knowledge systems. Our age-old traditions and practices, if followed under the guidance of qualified experts/medical professionals, can help boost our body's defense system against any virus including Coronavirus.

Native Traditional Food as Antivirals Against Covid-19

A series of emerging new diseases like SARS, MERS, Ebola outbreaks was actually the tip of the iceberg and the recent SARS-CoV2 pandemic should be the wake-up call for all of us. Incidentally, the COVID-19 vaccine has been developed within a record time and disseminated in many parts of the world, but 80% of

the third world population still relies on traditional medicines for almost all ailments (Pathak & Das, 2013). It will definitely take time for middle-class people to develop faith in VAX, but the zeal to improve one's immune system has grown manifold. Even, researchers and scientists all around the world have focused their attention to understand the biologically promising compounds from natural sources that are potential antivirals. This has led to many attempts to find alternative options, including the use of natural products and herbal extracts, to strengthen immunity and decrease the probability of being infected. In fact, recent research has shown that vegetables belonging to cucurbitaceous family with immense potential to be developed as an antiviral drug (Kapoor et al, 2020).

Till the invasion from innumerable different regimes, India had certain indigenous produce of its own. The traditional vegetables like bitter gourd, snake gourd, gourd, pumpkin, cucumber, etc. mostly belonging to the cucurbitaceous family of creepers were consumed. Both the fruit and the seeds of Cucurbitacins vegetables are used as traditional medicines as they contain a high amount of tetracyclic triterpenoids. The pulps of these vegetables are low fat in content but at the same time loaded with beneficial physiological and Immunomodulatory active bioactive compounds. Seeds of pumpkin have nutraceutical properties due to rich sources of various elements like antioxidant vitamins, tocopherols, and carotenoids. It is also known to possess proteins, polyunsaturated fats, and Phytosterols (Chandravadana & Subhash Chandra, 1990). These vegetables contain a high amount of vitamin A, vitamins B1, B2 and B3, and folate (Vitamin B9), vitamin C, and vitamin E. The mineral content is also impressive in a bitter gourd with a good source of potassium, calcium, zinc, magnesium, phosphorus and iron. Other potent bioactive compounds in bitter gourd are phenols, flavonoids, isoflavones, terpenes, anthroquinones, and glucosinolates (Snee et al, 2011). Lately, cucurbitacins B, E, and D exhibited potent antiviral activity against Bovine viral diarrhoea virus (BVDV), Hepatitis C virus (HCV) and against Herpes simplex virus (HSV). Pongthanapisith and his team (2013) deduced a novel protein

from *Momordica charantia* that inhibited different subtypes of influenza-A including H1N1, H3N2 and H5N1. It also reduces HIV viral replication and thus evades HIV-related T-cell infection. *Momordica charantia* extract also impedes the growth of Herpes simplex and Epstein Barr virus (Bakare et al, 2010; Kwatra et al, 2016).

The regular regime of starting the day with a cup of spiced tea with ginger and black pepper or a glass of hot milk with turmeric had long been decreed to be effective against the seasonal influenza virus with symptoms similar to the deadly coronavirus. In the past few months, innumerable reports are published regarding pathophysiological aspects of COVID-19, along with evidence about the therapeutic effects of curcumin in COVID-19 (Rocha & de Assis, 2020). Using the best rationale to look, there is some consistency as well as a controversy between epidemiological and laboratory findings given that Curcumin was shown to down-regulate the expression of angiotensin-converting enzyme gene receptor (ACE2), the entry point of COVID-19 (Akinyemi et al, 2015). It has already been proven that pro-inflammatory molecules like prostanoids and cytokines are down-regulated by Curcumin, hence bringing homeostasis during extreme immune responses of the body towards either any pathogen or cancer. Similarly, it might be possible that curcumin acts as an anti-inflammatory agent by bringing down ACE-2 expression thereby, suppressing the Cytokine storm caused in COVID-19 (Omosa et al, 2017). Besides, curcumin has shown synergistic therapeutic capability in combination with other natural products (Singh et al, 2013). Piperine in pepper slows the breakdown of curcumin in the liver, thus helping its absorption through the intestine and increasing its level in bloodstream (Shoba et al, 1998). In similar ways, gingerol, the natural active component of ginger belongs to the same family of compounds as curcumin of turmeric. Due to their similarity in chemical structure, both involve the same signaling pathways to mediate protection against

inflammations and oxidative damage, so are synergistic to each other (Al-Suhaimi et al, 2011). It needs to be noted that the benefits of curcumin as therapeutics for COVID19 have been reported, albeit most of them lack experimental pieces of evidence and rigorous research.

Moreover, the flip side of indigenous food consumption as per cultural and social norms also merits attention here. The fact that some or much of it may be consumed in its raw or semi-cooked state may have had ramifications of the disastrous sorts too, as has been proven by the recent pandemic. What is most pertinent is the hygiene and sanitation standards which may have been compromised earlier by some communities or individuals across the globe, due to general indifference coupled with their own possibly stronger immunities, as well as indigenous mechanisms of being able to ward off serious onslaughts to their health and bodily functions. Coronavirus changed things completely for how we view food, especially the kinds which come straight from animal sources. In developing countries, most people consume food depending on their availability, freshness, and low prices that are usually available in the informal (wet) markets. These informal markets are practically linked with a low standard of hygiene alongside poor food safety regulation. However, these markets serve the dual purpose of not only nourishing people; but also providing them with liveable wages. However, these informal markets are almost always associated with poor food safety regulation and a low standard of hygiene. Figure 3 shows the interdependence of humans with animals either for food or other commercial purposes has resulted in the emergence of many zoonotic diseases that got transmitted from animals to humans. As has been acknowledged worldwide, the COVID-19 pandemic is believed to have been emerged from coronavirus at an informal food market, in Wuhan, China (Naguib et al, 2021).

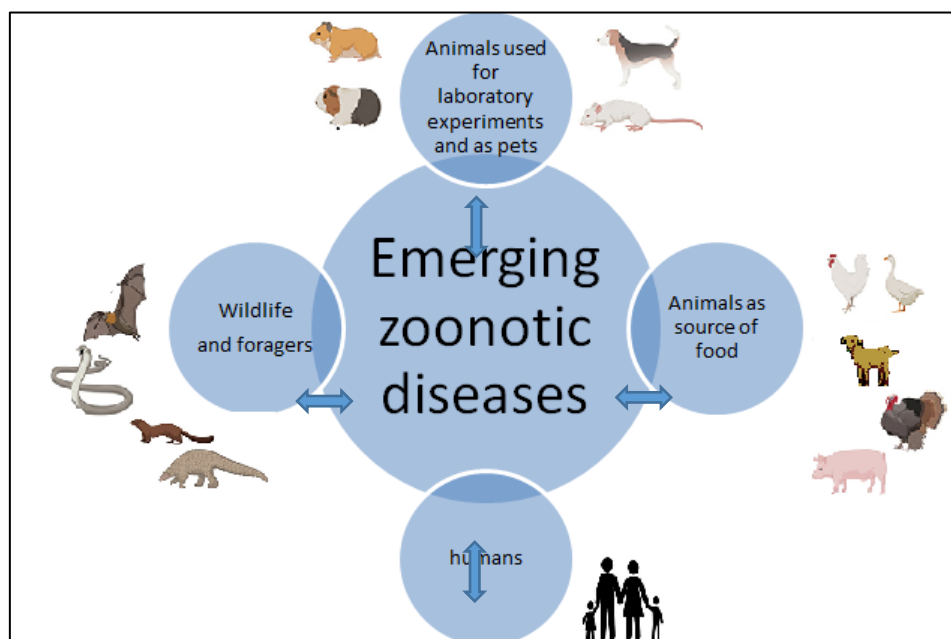


Figure 3: The interdependence and spread of zoonoses from animals to humans.

In India too, there are several ways in which health and sanitation standards are compromised, even in public spaces. Most people are not yet oriented to treating public spaces as something that they have responsibility for. So, dumping waste garbage by consumers of food as well as vendors of street food, vegetables, fruits as well as fresh raw meat and chicken is the norm. This continues to be the practice despite stringent measures being announced by the Government as part of their policy initiative of Swachh Bharat Abhiyaan, a mission that seems to be more impressive on paper. Undoubtedly, COVID-19 virus can be transmitted by touching contaminated food or food contact surfaces which could include food which is packaged, even if a healthy person touches these contaminated edibles, and then the same hand touches eyes, mouth, or nose.

Social Challenges

Perhaps the humble gourd and the most hated bitter melon are becoming victims of commercialization of certain vegetable produce like cauliflower, cabbage, tomato, capsicum, spinach, etc, considered to be appropriate by the social role models. Blame it on the global attitude; we Indians take no interest in what we

need to take pride in i.e. our wealth of indigenous plants, including fruits and vegetables. Sadly, bitter melon is one of those neglected vegetables that has its origin in native India and yet has almost lost the privilege to be served in our meals. Similarly, other vegetables belonging to the cucurbitaceae family like the gourd, cucumber, pumpkin, etc. are also witnessing the same fate of being unpopular. These vegetables have a sacred place in other ancient traditions too. Vegetables belonging to the cucurbitaceae family had their root in ancient traditions of Indian and Chinese food habits and medicines. It is the connection to ancestral knowledge that holds a deeper religious meaning within the natural world; there should be strong propaganda to revive and increase their consumption. We fear that aversion to consumption of these highly nutritious vegetables could be spelling a serious medical disaster situation and needs to be reversed. That the academic study of food and its consumption is in its infancy may be put down to its perceived lack of legitimacy. This may in part be considered allied to the twin issues of food as the everyday, and the overtly (historically) feminine focus of its production in most societies, both considered as lacking in academic authority until recently (Williams & Germov, 2004).

Another project, taken up in America recently, is of significance here. The purpose of the Traditional Foods Project (TFP) was to implement and evaluate a community-defined set of strategies to address type-2 diabetes by focusing on traditional foods, physical activity, and social support. In trying to promote better health parameters, it also sought to evaluate interventions across culturally and geographically diverse communities to demonstrate success. This study showed that Public health interventions are most effective when communities integrate their own cultures and history into local programs. The food sovereignty movement among American Indians/Alaska Natives and indigenous populations globally offers ways to address public health issues such as chronic diseases like type 2 diabetes. Historical, economic, social, and environmental determinants of health are critical to understanding the disease (DeBruyn et al, 2020).

We could get ideas for promoting indigenous food items in India, through the methods adopted by this project. For instance through 1) Discussions- TFP partners inspired the title of an article. "Traditional foods have become a way to talk about health" was a thread in every discussion. Partners constantly highlighted that chronic disease is deeply connected to social determinants of health, such as historical trauma, adverse childhood experiences, and loss of traditional foodways. The way to reclaim health, they said, is to reconnect with the land, water, traditional foodways, and all that they mean. 2) The power of stories and storytelling -Narrative stories, including those highlighting oral traditions were most prevalent compared with other types of stories reported. One story was by a young rapper who had struggled with identity and substance abuse. He "found himself through connection with the earth" in the community garden. He created his digital story to welcome all partners, skilfully rapping their names, at a TFP meeting. 3) Community engagement-Meetings hosted by TFP partners provided settings for sharing traditional foods, cultural ways, and physical activity. One of the most anticipated activities was the traditional game of stickball. The community was invited to participate or observe (and cheer). Stickball literally created a level playing

field, where TFP partners, Native Diabetes Wellness Program team members, and community members, women against men, enjoyed a physically strenuous, humor-filled game. 4) Knowledge sharing and gratitude- Dynamic exchange of knowledge demonstrated partners' engagement with each other. They shared skills (how to create digital stories), traditional foods (meeting hosts always prepared a feast), and gifts (heirloom seeds, wild rice). Partners were grateful for being able to openly express the meaning of traditional foods and spend time together. 5) Flexibility to do what works- At the request of grantee partners; they held a discussion on health policy in the second year of the TFP. Partners stated that measuring health policy only was unacceptable: "written policies tell people what to do." Health practices, however, "are chosen by the people because they are good ideas and reflect traditional knowledge." Subsequently, they measured both health policies and health practices. 6) Program sustainability- TFP partners regularly addressed sustainability, particularly toward the end of the TFP. Most partners sustained some or all activities after the TFP ended in September 2014. Partners secured funding from tribal councils, university partnerships, state and county health departments, federal agencies, or non-profit organizations (DeBruyn et al 2020).

So it is evident that Increasing and sustaining access to traditional foods depends on strong local support, collaboration, and traditional knowledge. And it is also true that traditional foods programs can be sustained if some basic conditions are met. These would have to include availability of financial resources, constant initiatives to disseminate information as well as local knowledgeable leaders to make such initiatives more enduring. What is obvious in this entire discussion is that taking decisions about what we eat, how we eat or cook, is a socially institutionalised mechanism. Thus, commensality is not necessarily associated with ceremonial occasions; it actually is an essential dimension of the common meal and it could even be said that it finds its most salient expression in that particular, daily social occurrence. Most importantly, it counteracts the most basic, biological, 'exclusive selfishness

of eating' and turns it into a collective act and shared experience. Commensality produces bonding (Fischler, 2011).

Conclusion

All of us who live in supposedly more evolved and developed parts of the world may have to do a paradigm shift of understanding Indigenous peoples. It has been documented that many local food systems have thrown up instances of resilience as well as increased involvement of women (Feeley, 2020). These co-dwellers of our planet, actually the original inhabitants, have extensive knowledge of the management of production and their agricultural practices as well as the perception of nature and food. They have woven intricate value systems, beliefs and norms around the same in order to make sense of their environment in a rational and even emotional manner. As Malinowski (2002) had documented through his rigorous research amongst the Trobriand Islanders (Argonauts of the western Pacific), let us not treat them as having no scientific rationale or try to evaluate them through the lens of our own understanding of scientific temperament. If Science is to mean Knowledge plus experience, then these indigenous communities have an ample amount of both. We need to be able to acknowledge that as well as be willing to reverse the trend of sharing knowledge systems, if and when required. Just as we apply our evolved ways of thinking to make sense of these 'primitives' as Malinowski had called them we need to accept their resilience as well as skills being of immense importance to us too.

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