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**Chapter**

# The Impact of Interpersonal Relationships on Dietary Habits

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## Abstract

In recent times, there is significant level of evidence to suggest a transition in the eating pattern and dietary habits of people across the globe. Food, though a physiological necessity and required for good health and functionality, also contributes to the social, cultural, psychological and emotional well-being of our lives. There is no doubt that relationships contribute to how, what and when people eat. This chapter will review the impact of how different categories and levels of interpersonal relationships impact on the development of dietary habits among people. Additionally the chapter will explore how the advent of the novel corona virus, covid-19 has impacted on interpersonal relationships and consequently on dietary habits.

**Keywords:** interpersonal relationship, dietary habits, covid-19, nourishing relationship, inhibiting relationship

## 1. Introduction

There has been a shift in dietary behaviors in the past few decades. Dietary habits of people have metamorphosed from less refined, low caloric and high dietary fiber foods to more refined, high sugary and fatty foods. Undoubtedly, food is a physiological necessity without which human existence will be impacted greatly. Food also serves as a means by which people can be brought together and shapes how people relate to each other. As people relate to each other, they tend to develop like and dislike for certain foods. This leads to the development of particular dietary habits. This chapter discusses interpersonal relationships and dietary habits. It also, describes how interpersonal relationships with one another undeniably influences dietary habits. Furthermore, the emergence of Covid-19 has brought about untold hardships and more importantly affected the dynamics of how people relate to each other. The impact of Covid-19 on interpersonal relationships and people's dietary habits will be reviewed.

### 1.1 Interpersonal relationship

Relating to others as humans, gives us a feeling of interdependence. In our daily interactions with others (family, friends, colleagues and strangers), we tend to

associate and connect. This generates a good feeling, especially when we acknowledge each other. A relationship is established when two people feel comfortable and decide to be in the company of each other. Consequently, people who enter into an interpersonal relationship must share common interests and goals. But then, persons who enter into interpersonal relationships due to work or other reasons must agree on some common goals and ground rules in order to live in harmony with each other and achieve their purpose.

Interpersonal **relationship** is an intense, profound, or close connection between two or more individuals that may range from brief to permanent interaction [1, 2]. Similarly, Portner & Riggs [3] defined interpersonal relationship as a connection between two or more individuals that may be short-lived to permanent. Family, friendship and other social influences are some perspectives from which interpersonal relationships are established. These perspectives may vary depending on the family, friends, marriage, external relations, connections at work, clubs and with neighbors. The foundation of social groups and society are law, custom and mutual agreement, and these are the structures that govern interpersonal relationships. Besides legislation, custom or mutual agreement, interpersonal relationship rest on love, solidarity, regular interactions, and or social commitment.

Choi et al. [4] also shared that interpersonal relationships may be seen as a social connection with others. We experience a variety of interpersonal relationships daily with family, friends, significant others and people at our workplace. While every relationship is unique, some common themes influence the health and continuation of all relationships. Some of these influences are communication, compatibility, honesty, forgiveness and time [5, 6].

Interpersonal relationships are fashioned for more reasons other than just the nature of our beings. Therefore, one must benefit, given the amount of effort required to form and maintain these bonds. Formation of dietary habits maybe one of the benefits that could be acquired through these bonds. For most of us, these relationships allow both parties to help fulfill the emotional and physical needs of one another. People with strong, healthy interpersonal relationships tend to be healthier and experience less stress from life challenges. Thus, Pronina & Gerasimova [7] reported that interpersonal relationships are one of the strongest, most profound and beneficial parts of our lives. There is no doubt that people refer to a circle of interpersonal relationships as a support network. However, not all interpersonal relationships are the same.

## 1.2 Categories of interpersonal relationship

Social scientists identified two main categories or groups of interpersonal relationships, which mainly focus on primary and secondary groups. The primary group consists of a person's primary source of relationships and socialization, and the secondary group, those of less importance but still significant to the individual.

### 1.2.1 Primary groups

Primary groups are described as close, personal, intimate and often a small relationship that can be stable or may last for a lifetime [8]. These relationships are intimate, enduring, deeply personal and loaded with emotions. Members of the primary group are typically composed of the family, childhood friends, romantic partners, members of a religious group or club who meet regularly and engage in activities together. To enhance relationship in primary groups, loyalty, care, concern, love and support should be paramount. In support, Lindenberg [9] noted that extensive interactions and strong emotional ties characterize primary groups.

Individual's sense of self and identity are formed mainly due to the close association and connection characteristic of the primary group. People are also influential in the development of norms, morals, values, beliefs, and everyday behaviors and practices of all members of the group.

*1.2.2 Secondary groups*

Secondary groups are comparatively composed of impersonal and temporary affiliations. They are task-oriented and mostly found in education, employment or club settings [8]. Secondary groups are mainly operational groups tasked to achieve a goal. These groups are often organized with ranges of a task to be completed. Without these interests, these groups (secondary) would not exist. A distinct characteristic of secondary groups is that people join voluntarily out of shared interest with the others involved. Some examples of such groups are students, teachers and colleagues at work. Some secondary groups can be large, and others can be small, depending on the task of the group. Examples of large groups are students and employees in an organization or institution. Small groups can be few people in an organization or groups of students who have been mandated to perform a task or project together. Small secondary groups play a passive role after completion of a task. It would be added that the warmth and deep connections in primary groups are missing in both the small and large secondary groups [8, 9].

A significant distinction between secondary and primary groups is that the secondary groups are more organized in structure, rules are formal, and there are leaders or administrators who manage and engage members regarding projects involved in the group. On the contrary, primary groups, are usually informal, and there may or may not be rules governing it. Because of its informal nature, members do observe each other and live based on the like or dislike of the other party.

## 1.3 Types of interpersonal relationship

*1.3.1 Family relationships*

A family is composed of individuals related by blood or marriage. Brown [10], is of the view that any combination of affiliation or marital relationships that join two people directly or through a third party is said to be a family. Thus, a family relationship exists between members of the same family. It is also known as a biological relationship. It is the immediate interpersonal relationship we form just after we are born into a family. Though it is the immediate relationship we build, we may have differing degrees of association with the members of the family. The relationship an individual may have with the mother may vary from that of the father, siblings and the extended family. The complexity and the level of engagement we may have in our families regarding interpersonal relationship may also be dependent on culture and religion. The family is the most critical unit in life and has significant involvement in our lives.

*1.3.2 Friendship relationships*

Friendship is an open interpersonal relationship which is voluntarily formed by individuals. It is entered into by personal choice and will. Friendship, as understood by Brown [10] is a distinctively personal relationship grounded on the tenant that each party is concerned about the welfare of the other party and involves some degree of intimacy. It is known that friendship shares the same or higher level of intimacy, just as it is in a family. Yet, the significant difference is that friendship

is a voluntary bond rather than being formed as a biological by-product or out of compulsion. In this relationship, it is assumed that there are no formalities and both friends enjoy each other's presence beneficially and mutually [3, 7].

Undoubtedly, friendship is pivotal in our lives, given that, friends can shape who we are as persons. There are no bureaucracies in friendship, and individuals, without hitches can enjoy each other's presence. Brown [10] again, stressed that the entire relationship of friendship revolves around trust. Additionally, transparency is an essential factor for a stable friendship. No relationship can be one-sided and same with trust [3]. This type of relationship exists between people of the same or different genders.

Friends motivate individuals to become better versions of themselves; encouraging them to pursue higher goals and bringing them closer to enlightenment. According to Pronina and Gerasimova [7], friendship can also be termed a platonic friendship or relationship. The authors noted that platonic relationship is a bond between two individuals deprived of sexual desire for each other. In such a relationship, a man and a woman can be good friends and do not mix love with friendship.

### 1.3.3 Love/romantic relationships

Love or romantic relationship is characterized by passion, intimacy, trust and respect. In a romantic relationship, people involved are connected, and the bond they share is immense [11]. The love encompasses a range of robust and positive emotional and mental states. This ranges from the most inspirational virtue or good habit, the deepest interpersonal affection and to the simplest pleasure [3]. It is obvious to note that in this relationship, both partners must trust each other [6]. Mutual respect is paramount. Both parties must reciprocate the feelings of each other for the attraction and admiration to stay in the relationship for as long as the relationship will last.

### 1.3.4 Professional relationship (work relationship)

A professional relationship is when individuals work together in the same organization with a common goal. It is primarily known that a co-worker or colleague is the name given to people who share a professional relationship. Often, they may or may not like each other, but because of their common goal as an organization, they must work together to achieve their purpose. It is, therefore, beneficial for a company to possess a healthy interpersonal relationship. When there is connectivity and a sense of goodwill among colleagues, good work habits are formed, and work output is enhanced [7]. When co-workers are happy, productivity is enriched, and it improves livelihood. This is because more time is spent at the workplace compared to time spent at home. Mental health is also enhanced if one is part of a group of people, and obtain feedback from the group. Feedback is important and bring out the best abilities in others [7, 12].

## 2. Dietary habits

Habits are "actions that are triggered automatically in response to contextual cues that have been associated with their performance" [13]. Dietary habit is an example of a habit formation that is relevant to health and can be defined as the habitual decisions an individual or culture makes when choosing what foods to eat [13]. It is a habit that can be acquired as a result of repetitive act of behaviors [14]. Dietary habits are thought to typically develop from childhood and usually retained during

the period of adulthood; however they vary among individuals and nations [15]. According to Birch et al., children tend to develop these habits through experiences, observations and interactions or interpersonal relationships with people who are close to them [16]. The home environment undoubtedly shapes how dietary habits are formed [17]. Family relationships where parents form an integral part are important in the formation of dietary habits. Siblings also play integral role to contribute to the formation of dietary habits through their eating behaviors. Additionally friends/peers play an integral role in forming dietary habits through their beliefs about food, modeling attitudes, pressure and normative behaviors [18]. It has been postulated that parents influence dietary habits through their day to day activities such as making of food choices for the family, parenting style, eating behavior and serving as role models. They also tend to use feeding practices as a way to re-inforce eating pattern development [16].

Food choices are normally formed around what is available, abundant or accessible [19]. Meal patterns include snacking behavior, meal timings, portion sizes, skipping of meals, frequency of meal consumption and taste preferences. Different meal patterns and nutritional composition of meals make an impact on diet quality which helps in understanding diet–disease relationships in populations [20].

## 2.1 Factors that affect dietary habits

Apart from physiological needs many factors influence what people eat or accept as food. Social, cultural, religious, economic and psychological determinants are among a variety of factors that influences dietary habits.

### 2.1.1 Social influences

Social influences on food intake refer to the impact that one or more persons have on the eating behavior of others, either direct (buying food) or indirect (learn from peer's behavior), either conscious (transfer of beliefs) or subconscious [20]. Attitudes and habits develop through interpersonal relationships with family, peers, work and school colleagues [21].

#### 2.1.1.1 Social support

The people we surround ourselves with have huge impact on our food choices. Studies show that people going through lifestyle transformation develop sustainable healthy habits and make healthier nutritional choices when they are surrounded by people who are supportive [22, 23]. Families and friends are widely recognized as being important in the shaping of healthy food choice decisions and eating practices. Eating family dinner has been associated with healthful dietary intake patterns, including the consumption of more fruit and vegetable, less fried foods and soda, less saturated and trans fat, lower glycaemic load, and high fiber and micronutrients intake [22, 23]. Family meals give parents the possibility to provide their adolescent children with nutritious and healthy foods, limit intake of calorically dense and junk foods, and to serve as role models for healthy eating behavior [24].

#### 2.1.1.2 Social class

Social class also influences dietary habits. Diets of people within a higher social class may differ from diets of those in a lower social class. It is reported that higher socioeconomic groups have healthier diets because they often have higher educational levels, may be more health conscious and have healthier lifestyles.

Low-income groups have a greater tendency to consume unbalanced diets and in particular have low intakes of fruits [20, 21]. There is abundance of literature to show that dietary costs are associated with these differences in food choice. Less nutritious, energy-dense foods are often cheaper sources of calories [25, 26] and higher diet quality has been associated with higher diet cost [27, 28]. The emergence of food deserts in some Western countries has also affected food accessibility and food environment (supermarkets, grocery stores, and food retail establishments) which further impacts on shopping and dietary habits. Poor people are more likely to eat poor diets because fresh, healthy food is not accessible in areas where they tend to live. Furthermore, upper class groups may consume foods that signify exclusivity and access to rare goods; while lower class groups, on the other hand, consume foods that are readily available. Some authors in a review paper also reported that efforts to open full service in food deserts had little effect on shopping or eating habits [29, 30].

### 2.1.2 Cultural and religious influences

Combinations of culture and religions which have been around for a long time have helped to shape dietary habits in populations through the provision of guidelines. Religion-related food habits are among the most variable of culturally based food habits. Some religions have specific guidelines which lead to certain restrictions [31]. For instance, Hindus do not eat beef because the cow is considered sacred. Jews, Muslims and Seventh Day Adventists also prohibit the eating of pork because it is unclean [31]. Compliance with guidelines regarding acceptable foods, food combinations, eating pattern and behaviors creates a sense of identity and belonging to the group.

Evidence has also shown that traditions, beliefs and values have influenced tastes for certain foods, mode of food preparation and other eating practices such as 'family style eating', eating with hands as seen in some African and Asian countries, eating with chopsticks in certain parts of Asia and Western style cutlery use [32]. Cultural influences on food choices are amenable to change, especially if someone lives in a multicultural setting or moves to a region or country which has a different culture [33, 34].

### 2.1.3 Economic influences

The price of food is a principal determinant of food choice. Economic factors such as food price and income influence people's food choices. Food costs are a barrier for low income-families to make healthier food choices. Low-income groups generally have low intakes of fruit and vegetables and a greater tendency to consume unbalanced diets [33, 35]. Higher income groups may have increased access to choose from a wide range of foods. The price of a food, however, is not an indicator of a better diet quality [19]. Cost is a complex combination of availability, status, and demand.

### 2.1.4 Psychological influences

Food preferences including like and dislikes develop over time and are influenced by personal experiences, exposure to food, family customs and rituals, advertising and personal values [19]. Food also represents security from an earliest age so it can form an important support in times of stress or any form of emotional tension [36]. Food can change an individual's temperament and mood and influence food choice. On the other hand, an individual's temperament and mood such

as anxiety, depression and boredom may trigger changes in human behaviors that affect food choices [36, 37]. However, the effect of these psychological conditions on food choice is complex and individualistic [36]. While some people turn to food for comfort by consuming more food and making unhealthy food choices, others may find it extremely difficult to eat at all or eat less [37]. In this way people form a set of food habits which may be healthy or unhealthy. Some of these psychological influences if not treated may lead to eating disorders such as anorexia nervosa, bulimia nervorsa and binge eating. Appropriate management and treatment of these underlying conditions by a multidisciplinary team including psychologists, physicians and a nutrition related professional can cure the eating disorder and improve dietary habits [30].

*2.1.5 Changing dietary habits*

Aging, globalization and urbanization affect how people interact with each other consequently causing significant changes in dietary habits and interpersonal relationship. Prominent among these changes are adulteration of traditional food habits, increased snacking and meals consumed away from home and, a shift toward increased consumption of fast food and high caloric sweetened beverages. Social media also influences dietary habits of people especially young persons. They promote a certain degree of ambiguity between modern foods that has a social identity appeal and traditional foods [38]. Additionally, advertising of foods can greatly impact upon dietary habits of individuals. The impact of advertisement particularly on children cannot be overemphasized. In a systematic review, Smith and colleagues [39] established the enormous influence of advertising on the dietary habits of children.

## 3. Influence of interpersonal relationships on dietary habits

Interpersonal relationship is captured largely within the psychological factors of the development of food habits [40]. Beyond the categories of interpersonal relationships earlier described in this chapter, the quality of interpersonal relationships can further be described as nourishing or inhibiting relationship styles [41]. Research has proposed a significant correlation between inhibiting relationship styles with eating disorders [41].

### 3.1 Nourishing relationship styles

The nourishing relationship style is characterized by protection, development of self-esteem, open and respectful communication [42]. Nourishing relationships can exit within both primary and secondary groups of interpersonal relationships. It creates a conducive environment that supports the basic mechanism of the development of dietary habits which are parental/caregiver role modeling, provision of healthy foods, and support for engaging in healthy eating behaviors.

A high percentage of children's preference for foods, which eventually contribute to their dietary habits, is developed very early in life (2 to 3 years), with little changes made in adult life [43]. A child's early experiences with food, eating, conditioning (whether positive or negative) and exposure, constitute key factors that determine food preference [44]. In nourishing relationships childhood experience is positive. Parents serve as role models for their children. Children develop preference for certain foods either directly, through observation of what parents actually eat or indirectly through transmission of eating-related attitudes.

Family meals are common in nourishing relationship styles and promote healthy dietary habits [45]. A positive relationship between frequent family meals and greater consumption of healthy foods has been reported [45]. For example, young adults who ate daily family meals during adolescence, ate more servings of fruits and vegetables daily as young adults than peers who never shared family meals in adolescence. Adolescents and children who join in fewer family meals consume more unhealthy foods [45]. Feeding practices on the other hand are devoid of coercion. Repeated exposure to initially disliked foods in an emotionally positive atmosphere increases preference and consumption of those foods [46].

Among adults, the atmosphere of respect, trust and protection entailed in nourishing relationship styles, enhances peer observation among family, work relations, friends etc. Men and women in a romantic relationship can adjust their own eating behaviors or feelings about their bodies in accordance with their partners. This is especially so in women than men [47].

### 3.2 Inhibiting relationships styles

Inhibiting relationship styles describe interpersonal relationships characterized by negative properties [41]. Individuals use various negative approaches to reach their expected aims in the relationship. It involves situations like ignoring, a sense of abandonment, disdainfulness, intimidation or humiliation [41]. Feelings of threats, loneliness and the absence of trust are common in such relationships. Relationships between family, friends, significant others and people at our workplace can equally be inhibiting.

In family relationships, especially between parents and children, an inhibiting relationship may affect parental role modeling and can promote unhealthy dietary habits such as overeating and a craving for sweet fatty foods as a means of self-comfort especially among adolescents [41]. Younger children may grow up disliking the foods they were forced to eat as children, or foods they were rewarded for eating, while liking the ones they were restricted from eating.

Common feeding practices used by parents/caregivers such as restricting foods (mostly foods considered as unhealthy), pressuring children to eat foods considered as healthy, or using foods as rewards, have been reported to inadvertently yield contrary results [41].

In romantic relationships, men and women may influence their partners' dietary habits. In particular, men appear to influence their romantic partners' weight concerns by placing a great deal of importance on women's body size and shape [47]. When these concerns are expressed continuously in an inhibiting relationship, women especially can adopt dietary regimens to alter their regular dietary habits, in an attempt to lose weight to please their male partners. For example, women may avoid carbohydrate foods altogether or reduce their intake, in what are termed the "ketogenic or low carb diets" respectively. When this avoidance is repeated over a period, it may become part of that individual's dietary habits.

## 4. Covid-19 and interpersonal relationship

In March 2020, the World Health Organization declared the Coronavirus disease 2019 (COVID-19) a global pandemic [48]. The unprecedented nature of the outbreak necessitated efforts by heads of states of countries all over the world to contain and control it. Among the measures recommended included staying at home, restricted movement of citizens except for essential services, specific health regulations, constraints, and social distancing. Governments imposed national

lockdowns and all individuals were encouraged to maintain strict social distancing from other people. While the right focus was to save lives, which are negatively affected by the virus and to limit the spread of the virus to reduce widespread mortality, it is equally important to address the profound impact of this virus on people's interpersonal relationships because of the strict protocols meant to prevent the spread of the virus.

The Covid-19 pandemic has restructured interpersonal relationships in exceptional ways, compelling people to stay further apart from others and to live closer with some people. In effect, social distancing has necessitated close and constant physical proximity with immediate family members, but isolated people from extended family members, friends and the wider communities. Schools were closed down, teachers and parents engaged in virtual teaching and home school for learners respectively, shops were closed, and employees run shifts. Eventually, the virus has been brought under control and life appeared to have returned to some degree of normalcy. But the pandemic has left some effects on interpersonal relationships.

Evolutionary approaches and attachment theory suggest that humans have a basic desire for interpersonal relationships that evolved in the interest of survival and reproduction, and that lack of social bonding is distressing because it runs counter to this basic need [47, 49]. For example, a study by Baumeister and Dewall demonstrated that a laboratory induced social exclusion is detrimental to cognitive ability, memory retrieval and logical reasoning [50]. Furthermore, the quality of interpersonal relationships can serve to promote or hinder physical and psychological wellbeing. For example, research suggest that interpersonal relationships that are characterized by responsive social support is associated with numerous health outcomes including lower mortality, healthier immune functioning and reduction in negative emotions. Negative emotions may be caused by stressors such as stress and anger [51, 52]. These jeopardize health and ruin positive emotional states such as love and belonging; the very variables that safeguard health [53]. Furthermore, Pietromonaco et al. [54] suggest that supportive close relationship promote health both by helping people cope with stress and by enabling them fulfill basic needs for social connection such as intimacy, love, companionship and security. On the other hand, a perceived lack of social support and lack of connectedness with others such as in the case of Covid-19, is related to mental health difficulties such as anxiety, depression and the development of various mood disorders [47, 55].

## 4.1 Covid-19 and interpersonal relationships within families

Within families, the duration of face to face interaction increased due to self-quarantine and social distancing measures which have both positive and negative effects. Positively, family members spend quality time together if it was absent during pre-Covid-19. Couples have opportunities to renew their relationships by learning new ways of handling conflicts as well as reinforcing the positive aspects of their relationship. Liu (2020) in a BBC report [56] revealed that in Wuhan, where the virus was alleged to have originated, there was an increase in marriage applications. This shows that the measures improved couple relationships to the extent that it resulted in their decision to take the next step to legalize their relationship. However, what is not known is whether these couples were living together or apart as this dynamic will have an impact on their decisions to tie the knot. Similarly, couples with children were able to make time for them, since previously, work and other commitments reduced the quality of time parents spent with their children. On the other hand, since the Covid-19 measures of isolation and self-quarantine (voluntary or mandatory) and social distancing was not by choice, it could have also exacerbated some underlying family tensions. Also, cases of domestic violence

spiked in a number of countries that went under lockdown [56]. For example, reports of domestic violence increased by a fifth in Spain, a third in France and similar trends in the UK, US, China and Hong Kong. The most vulnerable groups mostly affected were women and children although some men were also affected. Evidence suggests that confinement measures often lead to increased violence against women and children. Indeed, early reports from social service providers in China and some Organization for Economic Co-operation and Development (OECD) countries have shown an increase in domestic violence (DV) against women during the pandemic, as many women and children were trapped at home with their abusers [57]. Furthermore, the COVID-19 crisis placed women and children at further risk of violence as it restricted women's ability to put in place their usual safety mechanisms; for example, not being able to move in with relatives or send children out to play when the level of abuse was getting out of hand.

## 4.2 Covid 19 and interpersonal relationship with extended aged family members

Under confinement and social distancing measures, limited contacts were recommended for the aged as they were more vulnerable to contracting the virus than the younger population. The aged populations were usually physically and socially vulnerable and had reduced access to essential services and social support. Thus, Covid-19 presents significant effects on their social connectedness, as the measures to contain the disease prevented them from receiving the quality of support they need. Unfortunately, the aged are also the least likely to be able to make use of technology to connect with their loved ones and other support service. This is because they are less familiar with online communication technologies such as video conferencing and other social media applications. The aged are not the only ones with these challenges but their family members who are unable to visit may experience considerable distress for their inability to visit and more importantly dine with the elderly outside their home. These challenges have mental health implications in the aged as well as their loved ones who are unable to visit or connect with them.

## 4.3 Covid-19, interpersonal relationship and stigmatization of recovered patients

Stigma can be defined as a mark of disgrace that sets a person apart from others [58]. The fear and uncertainty as well as the misinformation about the virus has led to considerable stigmatization of individuals affected by the virus. For example, In Ghana, anecdotal reports in the media revealed that, some shop owners in communities where a Covid-19 survivor resides, refused to retail their wares to the survivors and members of their family because of Covid-19 stigmatization. One survivor mentioned that his house was referred to as "Covid-19 house" [59]. Similarly, healthcare workers' attitude and provision of service to infected persons has been less than expected. Ramaci, et al. [60] suggest that the stigma and fear of the disease hinder health workers of different roles and responsibilities from responding correctly. These negative attitudes have a negative impact on the interpersonal relationships between community members, healthcare workers and survivors of the disease. The resultant effect is mental health disorders such as depression, anxiety and stress.

The covid-19 pandemic has had considerable effect on the interpersonal relationship of couples, families, the elderly, infected/ recovered persons and healthcare workers. Klinenberg [61] suggest that the risks of social isolation and loneliness among the various affected groups for both physical and psychological wellbeing

is considerable and necessitates psychological intervention measures to be implemented globally since mental health implications are lifelong.

## 5. COVID-19 and dietary habits

Added to the impact of Covid-19 pandemic on health and mortality, there is a severe economic and social crisis. Many are now unemployed, under-employed, or working partially from home with pay cuts observed for some high-profile workers and pay checks frozen for some people. Thus, people are unable to purchase and consume food needed for their growth and development and this has affected their dietary habits.

The Covid-19 pandemic has influenced eating habits in two main ways. First, it has led to food insecurity due to food shortages, increase food prices and loss of income. This has led to acute changes in eating and dietary habits. Currently millions of children, adolescents and families are impacted by this global crisis and are at risk of acute food insecurity [62]. Many people in both developed and developing countries are affected equally by food insecurity due to the pandemic, and many are worried about the prolong impact of hunger on malnutrition [63]. The United Nations World Food Program has estimated that 265 million people could face acute food insecurity by the end of 2020, thus almost doubling the number of people under severe threat of food insecurity around the world [64]. The Global report on food crises has estimated that the number of acutely food-insecure people in need of urgent assistance in the world is rising [65].

In the United States for example, the loss of income and jobs due to COVID-19 has led to many families over relying on food system such as the food banks, food stamps, welfare centers and other benevolent societies such as the church and community groups [66, 67]. Reports have shown that since the COVID-19 pandemic, 37 million people rely on food stamps and government support [68]. In the USA, over 40 million people have filed for unemployment benefits, and the government is unable to satisfy this demand [69]. This has led to hunger and starvation among many people especially children and the elderly. The few who may have access to these benefits and food supplies may have to change their dietary habits to adapt to what is available to them by benevolent organizations and food systems. Children are unable to get the proper nourishment from the foods that they would normally consume in the absence of Covid-19. This has limited their access to nutritionally diverse diet as they consume what is available to them. This may continue to weaken the health and nutrition status of children living in food crises, with dire consequences for their development and long-term productivity. There is therefore a global call to make food security and healthy eating and behavior a priority during this pandemic.

Second, the lock down, work from home policies and confinement established by many countries to deal with this pandemic, changed daily habits including diet, social interactions or interpersonal relationships, and sporting activities. This limited movement has affected the lifestyle of many children and families around the world.

Many people working from home spend long hours behind the computer (teleworking). In the USA, for example, it is reported about 5 million employees work from home and about 46% of American employers have implemented work from home policies [70, 71]. Similarly, the screen time for children have increased, while their social interactions and outdoor play time and activities have decreased [72]. This has created physical inactivity for many adults and children. A French study reported that about 53% of people decreased physical activity while 63%

increased sedentary time during the lock down [73]. In addition, the proposed virtual learning for children in the coming school year will exacerbate the existing limited physical activity.

Again, the lockdown has led to children eating more than expected, and the choice of food has been unhealthy. The frequency of meals has increased and timing of meal have been disrupted due to the breakdown of daily routine and structure in the home because of the lock down [74]. Similarly, screen time of adolescents have also increased especially on their mobile phones [75]. Thus, the choice of unhealthy foods at home while on screens and the reduced physical activity has led to weight gain among children, adolescents, and adults over the past few months. An Italian study reported 39% of weight gain during the lockdown [76], while another study found an increase in "comfort food" consumption, notably chocolate, ice-cream, and desserts (42.5%) and salty snacks (23.5%) among people in lockdown [77]. Even though about 21.2% of responders increased their consumption of fresh fruit and vegetables, about half of the population indicated that fruits and vegetable were not appealing to them while in lock down [77]. Surprisingly, about 50% of the respondent did reduced their purchase of ready to eat food, a clear evidence of change in dietary habits. Furthermore, food accessibility may be impaired during confinement, which could easily affect the overall diet quality. Shortages in meat and poultry products may have led to decreased consumption of these foods, thus affecting food choices.

## 6. Mindful dietary choices and positive interpersonal relationships

Interpersonal relationships affects not only mental health and physical health but also health behavior and consequently mortality risk [78]. Interpersonal relationships play a vital role in the mindful dietary choices of an individual and could culminate into short- and long-term effects on health. To maintain healthy relationships, one should not only engage frequently in self-analysis and constant improvement of their personality, but also learn to accept individual differences and personality traits of others. Holding good interpersonal skills with people is essential for successful living in all life stages; personal, social and cooperate [79].

Positive relationships and interpersonal skills can be challenging for many individuals. Developing these skills takes determination, courage, a desire to cultivate strong personal and working relationships, and an understanding of the value and benefits of these skills. It demands practice, hard work, and a commitment to building cultures of trust, communication, kindness, and collaboration. The first and most important factor is communication. This requires in-person discussions about ones feelings, honesty and transparency. Beside these, it is also important for individuals to: Establish boundaries; be active listeners; show respect to others all the time; maintain a positive attitude; be open to constructive criticism and feedback without becoming emotional [79].

At some point in a relationship, conflict may arise. The ability to deal with the situation appropriately determines whether the conflict strengthens the relationship or not. For example, in certain situations of conflicts, rather than avoid the point of contention, it may be important that the individual learns to listen to the opposing point of view and talk it through [78].

Stress resulting from unhealthy relationships undermines health through behavioral, psychosocial, and physiological pathways. For example, stress in relationships contributes to poor life style choices in childhood, adolescence, and adulthood. Stress contributes to psychological distress and physiological arousal (e.g., increased heart rate and blood pressure) that can affect the body through cumulative wear

and tear on physiological systems, and can lead people of all ages to engage in unhealthy behaviors (e.g., poor dietary habits, heavy drinking, smoking etc.) in an effort to cope with stress and reduce the unpleasant arousal. In an instance where an individual is troubled about issues at work or school or encounters a problem with a friend, family member, or partner, it may be better for them to speak up or communicate wisely for a peaceful resolution than to harbor any negative feelings (hurt, pain, resentment, anger etc.) which could lead to stress [80]. In a recent study by Berber-Celik and Kaya [81] it was shown that interpersonal relationships played a role in unhealthy eating attitudes. Additionally the study revealed that nourishing relationship style is an explanatory variable for eating attitude. Kazemi et al. [82] also found that social support and the attitude toward nutrition are among the important and efficient factors in female adolescents' nutritional behavior.

Mindfulness is the capacity to bring full attention and awareness to one's experience, in the moment, without judgment [83]. It helps individuals become aware of their thoughts, feelings, and physical sensations related to eating, whiles reconnecting with innate wisdom about hunger and satiety. In essence, mindful eating entails being fully attentive to one's consumption of food, purchasing of food, preparation and serving of the meal as well as and the type and amount consumed [84].

In other words, it is very crucial to engage in mindfulness-based interactions, this can help promote positive interpersonal relationships and improve mindful eating in individuals [85]. Kalavana et al. [86] further indicated that family cohesion and peer approval of new eating habits were predictors of healthy eating, while family conflict, peer attitudes toward food and adaptation to the eating patterns of peers are significant predictors of unhealthy eating behavior. Learning to cope with family conflict, learning to resist peer influence regarding food and eating habits and increasing goal efficacy i.e. the self-confidence to attain a goal, seem to be important to reduce unhealthy eating. As family cohesion is a predictor of healthy eating, more attention should be given, especially to adolescents with a less cohesive family. Moreover, since both goal efficacy and goal ownership (self-confidence and self-determination) are positive predictors of good eating habits, they should be encouraged and supported to enhance healthy eating in individuals [86].

The individual's consciousness of personal physiologic needs and limitations when eating irrespective of social pressures is key in equipping them to make mindful dietary choices whiles engaging in positive interpersonal relationships. Eating should be seen as a chance for the body to be nourished and nurtured.

## 7. Conclusion

From the definitions given and the discussions raised, it would be reiterated that social interactions, associations or affiliations between two or more individuals underpin interpersonal relationship. Though there are connections and affiliations, the level of intimacy and sharing may differ depending on the kind of relationship that exists. Dietary habit formation as explained, are developed mainly as a result of relating to other people. Cultural, religious, social and economic factors have major influences on dietary habits. This effectively means that dietary habits are resistant to change but not static. Also, the emergence of the Covid-19 pandemic has brought about untold hardships affecting socio economic status of people and consequently affecting dietary choices. Many people have either lost their sources of income or have had pay cuts. This ultimately affects what food they can afford to buy for themselves and their families.

So the need to engage in positive interpersonal relationship is paramount in ensuring good dietary habits. Engaging in positive interpersonal relationships

ensures healthy relationships which improves self-worth, promotes self-confidence and control of ones' own affairs whiles avoiding choices that may be self-defeating or destructive. It is often devoid of pain and discomfort of stress, anxiety, and depression, but characterized by the individual's ability to effectively resolve conflicts and to make mindful general health and life choices as a whole. It involves making clear choices, removing the roadblocks, and transforming one's life for the better, enabling the individual to develop healthy dietary habits by making mindful dietary choices.

## Conflict of interest

The authors declare no conflict of interest.

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