

Chapter 4

Family Mealtimes: Promoting Health and Well-being



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Abstract Family mealtimes are associated with a host of important health outcomes. This chapter uses a systems approach in applying the socio-ecological model to the complex relations among family dynamics during mealtimes, food consumption, and children's health. Three health outcomes are considered: mealtime routines and communication as protective factors for pediatric chronic health conditions, distractions and chaos in relation to nutritional health, and acculturation and adapting mealtime practices in the face of globalization and the influence of advertising on dietary habits. The chapter concludes with limitations of current research and directions for future research.

Keywords Family mealtimes · Pediatric nutrition · Family chaos · Pediatric chronic health conditions · Global health · Food and children's health · Mealtime routines · Chaos and health · Remote acculturation · Globalization and dietary habits

Food and family go hand in hand across the life span. The dietary patterns established in the first 1000 days of life (the period from conception to 2 years of life) portend for health outcomes in later childhood and into adulthood. For example, infants who are breastfed for 2 months or less are more likely to gain weight rapidly in the first 2 years of life (Carling, Demment, Kjolhede, & Olson, 2015). Rapid weight gain in the first 2 years of life is associated with increased risk for obesity and overweight during adolescence and adulthood (Peneau et al., 2017; Ziyab, Karmaus, Kurukulaaratchy, Zhang, & Arshad, 2014). However, these are not direct one-to-one correspondences as parenting practices, including responsive parenting, have the potential to modify early risk factors (Savage, Birch, Marini, Anzman-Frasca, & Paul, 2016). Other parenting practices that act as important modifiers include the active involvement of fathers (Davison et al., 2019), child care feeding

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practices (Dev, McBride, Speirs, Donovan, & Cho, 2014; Sisson, Krampe, Anundson, & Castle, 2016), and cultural expectations and traditions (Hammons, Wiley, Fiese, & Teran-Garcia, 2013; Kim, Fiese, & Donovan, 2017). Thus, even a cursory look at the early food environment suggests that there are multiple influences on the connection between food, family, and health. In order to account for these multiple influences, it is important to propose a coherent conceptual model that can guide predictions as well as interpretation of findings.

This chapter will apply a systems approach to the socio-ecological model as a guiding framework to understand the complex relations among family dynamics during mealtimes, food consumption, and children's health. After providing an overview of the theoretical model, three health outcomes are considered: mealtime routines and communication as a protective factor for chronic health conditions, distractions, and chaos in relation to nutritional health, and acculturation and adapting mealtime practices in the face of globalization and the influences of advertising on dietary habits.

Connecting Food and Family from a Socio-Ecological Framework

Socio-ecological models are guided by the seminal work of Bronfenbrenner (1979) and expanded by Bronfenbrenner and Evans (2000). At its core, the socio-ecological model proposes that child development is affected by multiple spheres of influence ranging from more proximal influences, such as the family, to more distal influences, such as federal and state policies. Several scholars have adopted socio-ecological models to explain patterns of food consumption and a variety of health outcomes. For example, Davison and Birch applied Ecological Systems Theory (EST) to account for child weight status including: child characteristics of dietary intake, sedentary behavior, gender, and age; family characteristics of feeding practices, family TV viewing, and parent food preferences; and community and societal characteristics such as socio-economic status, accessibility of recreational activities, and school lunch programs (Davison & Birch, 2001). Similarly, Neumark-Sztainer applied an ecological model to account for variations in weight-related problems (e.g., eating disorders, body image issues). Individual characteristics included timing of puberty, sexual orientation, and personality traits. Family influences included eating out practices, parental support, and parenting styles. Peer influences included peer weight talk, peer dieting, and peer media use. School and other institutional factors included sports, coach attitudes, and school lunch. Community factors included parks, safety, fast food restaurants. Societal factors included role expectations, weight discrimination, and media influences (Neumark-Sztainer, 2005).

The socio-ecological model applied in this chapter is based on the Six-C's model by Harrison and colleagues (Fiese, Bost, McBride, & Donovan, 2013; Harrison

et al., 2011). The model is adapted (and simplified) to meet the objectives of the chapter and focus on food and family in the context of family mealtimes. The Six-C's refers to cell, child, clan, community, country, and culture (See Fig. 4.1). The cell level includes genetic predispositions and biological contributions to how the child may react to different foods and interact around food. The child level includes temperamental characteristics and affective responses to food and feeding dynamics. The clan level represents family dynamics and parenting practices. Community includes schools (including early care and education), peer influences, and access to food. Country includes local, state, and federal policies that can act as supports or barriers for food consumption. Finally, culture includes culture-specific traditions and expectations surrounding food. Because the focus of this chapter is on family mealtimes, the emphasis will be on the intersection of the clan level with the child, community, country and culture levels.

Healthy Family Mealtime Routines

From a socio-ecological perspective, family mealtimes serve as a link between child characteristics (e.g., temperament, affective response to the food environment) and more distal influences (e.g., community food environment, access to food). One way to understand these connections is to focus on the regulatory processes inherent

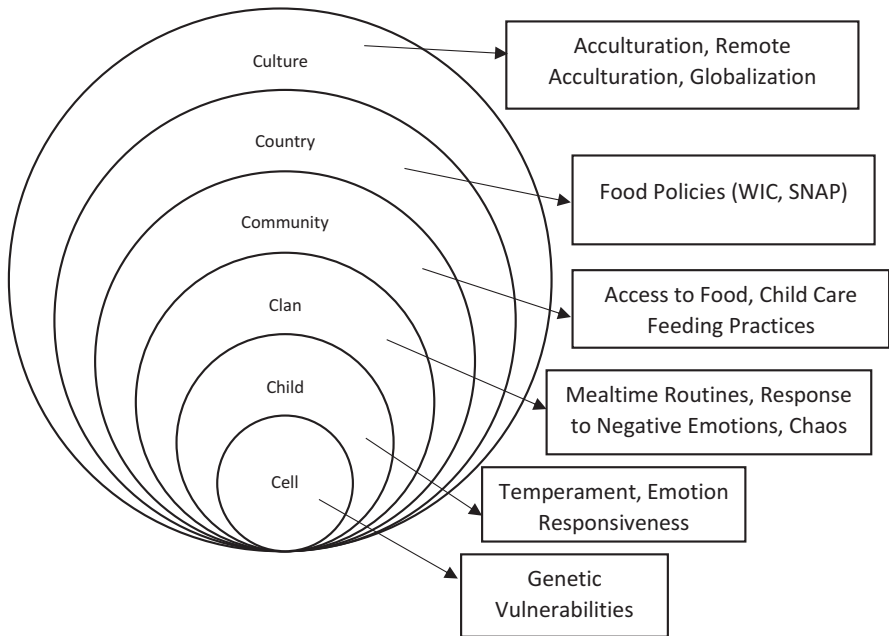


Fig. 4.1 Ecological Model of Family Mealtimes

in family routines and how they may foster positive health outcomes, or the converse, create atmospheres of risk.

Routines provide predictability and order to family life. When repeated over time, routines have several key elements that are associated with children's health: assignment of roles, planning, expectations for attendance, modulation of emotion, and the creation of symbolic meaning (Fiese, 2006). Developmentally, routines become more organized as children become more active participants and provide input as to how the routine is carried out (Fiese, Hooker, Kotary, & Schwagler, 1993; Spagnola & Fiese, 2007). Mealtime routines are associated with children's nutritional health. Families reporting that they regularly shared meals together three or more times per week were 12% less likely to have a child who was overweight; had a 20% reduction in odds of eating unhealthy foods; a 24% increase in odds of eating healthy foods; and were 35% less likely to have a child with an eating disorder (Hammons & Fiese, 2011). During the preschool years, children who are more actively involved in food preparation, grocery shopping, and meal planning are less likely to consume fast food and more likely to consume fresh fruits and vegetables (Metcalf & Fiese, 2018).

Moving beyond the sheer frequency of sharing meals together, variations in the social interactions observed during mealtimes may explain some of the effects on children's health. Three elements are of particular importance to a healthy mealtime: (a) positive interpersonal communication, (b) adequate response to negativity, and (c) an environment that is relatively free of disruptions to communication. Positive interpersonal communication can be framed from the McMaster Model of Family Functioning (Epstein, Ryan, Bishop, Miller, & Keitner, 2003). Positive interpersonal communication emphasizes the need for families to exchange information in a clear and direct manner with little to no hidden agendas. Direct observations of mealtimes have indicated that families who show genuine concern for each other's daily activities and communicate in a clear and direct manner have children who are of healthier weight and engage in healthier eating habits (Czaja, Hartmann, Rief, & Hilbert, 2011; Fiese, Hammons, & Grigsby-Toussaint, 2012). Thus, a key component to healthy mealtimes is to conduct conversations that communicate to all family members that they are valued members of the family and that their concerns of the day will be fully considered.

Response to negative emotion is also an important key element to regulating behavior during mealtimes. It is unlikely that every mealtime will proceed smoothly. It is likely that expressed opinions about the food served or sibling conflict may arise at the table. Indeed, these behaviors are often noted as causes of mealtime challenges by parents of preschool and school age children (Fulkerson et al., 2011; Quick, Fiese, Anderson, Koester, & Marlin, 2011). In a cross-sectional self-report study, parent response to negative emotion was related to more restrictive feeding practices and fewer mealtime routines, which in turn was associated with the consumption of less healthy food (Bost et al., 2014). Direct observation of mealtime behaviors also suggests that families who have more difficulty managing affect during meals also have children who are more likely to be obese (Berge, Jin, Hannan, & Neumark-Sztainer, 2013). The expression of negative emotion is part and parcel

of family mealtimes. However, the management of negative affectivity is an opportunity to create an atmosphere that may lead to calm and modulation of emotion rather than dismissal or escalation.

The third element to consider is structure and/or chaos. As previously mentioned, routines provide a sense of order to daily life. When routines are disrupted or lacking, then chaos prevails. Chaotic environments are characterized by a lack of structure, frenetic activity, background noise, and unpredictability (Evans, Gonnella, Marcynyszyn, Gentile, & Salpekar, 2005). Central to our concern is the role that chaos may play in disrupting communication that is essential to healthy mealtimes. There is considerable evidence in the literature documenting the role that habitual distractions may play in the risk for obesity, including the presence of television during mealtimes (Coon, Goldberg, Rogers, & Tucker, 2001; Gable, Chang, & Krull, 2007). There is also evidence that family chaos is associated with unhealthy food consumption for preschool age children (Martin-Biggers, Quick, Zhang, Jin, & Byrd-Bredbenner, 2018) and may moderate the effects of responsive feeding practices when toddlers overeat (Saltzman, Bost, McBride, & Fiese, 2019). In this chapter, a more process-oriented view of chaos will be presented. It is proposed that chaos during mealtimes is observed as distracted behavior that disrupts the positive elements of communication and ability to respond to emotions. Thus, a key element of healthy mealtimes is creating an atmosphere that is relatively free of distractions and chaos.

Mealtime Routines: Protective Factors for Childhood Chronic Health Conditions

There is a long tradition of considering family dynamics as a protective (or risk) factor for pediatric health conditions (Kazak, 1989). Central to this proposition is that well organized households will protect children from some of the mal effects of chronic health conditions. One particular organizational context that has received considerable attention is family mealtimes. The direct observation of family mealtimes for families with a child who has a chronic health condition has been applied to cases of pediatric asthma (Fiese, Winter, & Botti, 2011), cystic fibrosis (Janicke, Mitchell, & Stark, 2005; Speith et al., 2001), Loss of Control Eating (LOC; Czaja et al., 2011), and type I diabetes (Patton, Piazza-Waggoner, Modi, Dolan, & Powers, 2009).

Many researchers have applied the McMaster Model of Family Functioning (Epstein et al., 2003) to detect variations in family interaction patterns and predict health outcomes. The Mealtime Family Interaction Coding System (MICS; Dickstein, Hayden, Schiller, Seifer, & San Antonio, 1994; Hayden et al., 1998) is an observational system based on the McMaster Model of Family Functioning. The coding system includes dimensions that parallel the McMaster model: Task Accomplishment, Communication, Affect Management, Interpersonal Involvement, Behavior Control, Role Allocation, and Overall Family Functioning. In a study comparing families with preschool age children who have cystic fibrosis to healthy

control families, the families of children with cystic fibrosis were observed to function poorer on all dimensions of the MICS (Speith et al., 2001). The dimensions where there were the greatest discrepancies were Communication, Affect Management, and Role Allocation. Taken together, these dimensional contrasts suggest that for families in which it is a struggle to feed their children, it is also a struggle to communicate in a clear and direct manner, manage affect, and assign roles to family members. The resulting image is one of strain and conflict at the table.

Again, using the MICS, the relation between mealtime interactions and dietary adherence and glycemic control in young children with type 1 diabetes was examined (Patton et al., 2009). Researchers found significant negative associations between dietary adherence and Task Accomplishment and Behavior Control. Further, there was a negative association between affect management and percent of blood glucose levels below the normal range. The authors concluded that if children with T1 diabetes are exposed to mealtimes that are disruptive and poorly managed, then there are consequences to dietary adherence. They proposed a transactional process whereby the burden of feeding a child with T1 diabetes in terms of counting carbohydrates may increase stress at the table and increase the likelihood that the child responds with negative affect. Consistent with the findings among children with cystic fibrosis, a pattern emerges whereby lack of structure at the meal is associated with negative affect, poor communication, and stress, which in turn may compromise the child's health. This pattern can also be seen in the case of pediatric asthma.

Asthma is one of the most common chronic diseases of childhood, affecting over 6.2 million children and youth in the USA (Zahran, Bailey, Damon, Garbe, & Breyse, 2018). Several family interaction factors have been found to moderate and mediate the expression of asthma symptoms including open and direct communication, positive affect, and low levels of conflict (Kaugers, Klinnert, & Bender, 2004). Although it can be argued that overall family functioning may be associated with better asthma management, the ability to detect specific behaviors such as those named above may pave the way for more effective interventions.

The ABC mealtime coding scheme is a time-based observational system that captures the amount of time that family members spend in three types of behaviors: Action, Behavior Control, and Communication (Fiese et al., 2011). This coding scheme builds upon the MICS by emphasizing the central role of clear and direct communication in mealtime interactions. The Action dimension reflects how much *hub bub* is apparent at the meal or how much family members get up and down during mealtime. The Action dimension is considered important as it signifies whether family members are present at the table or distracted. The Behavior Control dimension reflects the degree to which behavior is managed or controlled during the meal as it appears to be an essential ingredient in the task of feeding children (Hughes, Power, Fisher, Mueller, & Nicklas, 2005). The time-based approach allows for an examination of how much time family members spend in each of the categories and whether there are distinctions between groups (e.g., socio-demo-

graphic, health outcomes) and how time is spent interacting during the meal. The time-based approach provides guidance for intervention in terms of which behaviors may be associated with health outcomes.

In an observational study of 200 children with persistent asthma, the ABC coding scheme was applied. Health outcomes included medication adherence (measured via electronic monitoring of inhalers), asthma severity, lung functioning, and child quality of life. It was found that the amount of time spent in positive communication was related to medical adherence and child quality of life and negatively related to child asthma severity. The amount of time spent in Action was negatively related to child quality of life. Behavior control was positively related to asthma severity and negatively related to child quality of life symptoms. Even when controlling for maternal education and overall general family functioning, mealtime interpersonal communication remained a significant predictor of child quality of life.

Mealtime observations are snapshots of family life for children with chronic health conditions and provide a glimpse into daily challenges in managing routines. When considering conditions such as cystic fibrosis and diabetes that have inherent dietary demands, mealtimes become not only an important part of the health regimen but are also potentially emotionally charged events. The observation of these routines then illustrates how managing affect, setting rules, and communicating in a clear and direct manner become not only part of family dynamics but also essential to the health of the children.

In the case of pediatric asthma, where the meal itself may seem somewhat more removed from the health outcomes, it is the organization of the routine itself that may provide a better understanding of how the family approaches the challenge of managing a health condition that requires daily attention. For example, adherence to asthma medication protocols is notoriously poor, hovering around 50% (Bender et al., 2000). If families are able to successfully organize mealtime routines that are predictable, have relatively few distractions, and communicate to their children an interest in their daily lives, then their children are less likely to have severe symptoms and adhere to their medication regimen. Granted, this might be part of a larger picture of an organized household overall. However, the central role of organized mealtimes cannot be dismissed as it occurs on a regular basis and conveys a sense of commitment (rather than emotional volatility) that may be associated with these positive health outcomes.

Distractions, Chaos, and Children's Nutritional Health

Chaotic environments have been characterized as crowded, noisy, frenetic, unstructured, unpredictable, and simply out of control (Evans et al., 2005). Children raised in chaotic environments are more likely to experience socio-emotional problems (Evans et al., 2005), compromised executive functioning skills (Brieant, Holmes, Deater-Deckard, King-Casas, & Kim-Spoon, 2017), and behavioral regulation problems during the early school years (Vernon-Feagans, Willoughby, Garrett-Peters,

& FLP Key Investigators, 2016). As previously mentioned, there is considerable evidence that the presence of a television during mealtimes is associated with increased risk for poor eating habits and obesity (Coon et al., 2001; Gable et al., 2007). However, what is less clear is the process by which distracted dining is associated with poor nutritional outcomes. To that end, observational studies are most helpful.

In an observational study of 109 families with 18–24 months old children, the ABC mealtime coding system was adapted to include distractions during the meal (Saltzman, MUSAAD, Bost, McBride, & Fiese, 2019). These included: technology distractions (i.e., use of electronic devices such as cell phones, tablets, television); non-technology distractions (e.g., playing with toys, pets); leave-taking distractions (e.g., leaving the meal, answering the door, going to the bathroom, leaving for work); and food-related distractions (e.g., retrieving or putting away something for the meal away from the meal location). The investigators found that overall, families spent about 20% of the mealtime in some type of distraction. Mothers spent a greater amount of time in food-related distractions; fathers spent a greater amount of time in leave-taking distractions; and children spent the most amount of time in technology related distractions. The investigators examined whether maternal responsive feeding style, a protective factor against unhealthy weight, was related to distractions during the mealtime. Maternal non-technology distractions and paternal total distractions were negatively associated with maternal responsive feeding observed during the meal. The authors concluded that father involvement during mealtime plays a supportive role for mothers, allowing them to be more responsive and less distracted. It is plausible that fathers were able to reduce the child's distracted behavior by engaging them in conversation rather than the child being distracted by screens or other objects. Thus, a whole family approach to family mealtimes may provide a more complete picture of how distractions affect processes associated with nutritional health.

An experimental approach was taken to understand the role that distractions may play in nutritional health (Fiese, Jones, & Jarick, 2015). In a study of 60 families (109 parents and 126 children), half of the families were exposed to a very loud vacuum cleaner outside of the observational dining room. The researchers reasoned that the noise created by the vacuum cleaner would distract the families and disrupt communication thought to be essential for a healthy mealtime. Somewhat surprisingly, no family exposed to the loud vacuum cleaner rose to open the door to see what was going on. (Some popcorn was spilled outside the door and the families were told that facilities and services had yet to arrive to clean up the mess). The investigators sought to determine whether the loud noise would indeed disrupt communication and if it would have any effect on food consumption. Overall, families who were exposed to the vacuum cleaner engaged in more Action behaviors (i.e., getting up and down from the table) and less Communication behaviors (i.e., showing genuine concern and regard for each other's thoughts and feelings). In addition, those exposed to the vacuum cleaner ate more cookies and drank more diet soda than the control families. In this experimental study, a minimal manipulation of exposure to noise resulted in less *positive communication* and more *activity or*

distraction behaviors. Disturbances to these two essential components of healthy mealtime behaviors may lead to poor nutritional habits over time. Whether distracted by noise or technology, lack of attention to other family members during this brief regular routine can have detrimental health effects.

Finally, chaos has also been examined in the context of households that are food insecure. Food security is defined as having access to adequate amounts of food to lead a healthy, active life (Nord, 2012). In 2017 in the USA, 15.7% of households with children were classified as food insecure (Coleman-Jensen, Rabbitt, Gregory, & Singh, 2018). For households with children headed by a single woman, 30.3% were food insecure (Coleman-Jensen et al., 2018). Food insecurity has serious health consequences for children including compromised brain functioning, birth defects, being hospitalized, and have poor health overall (Gundersen & Ziliak, 2015). Despite the well-documented relation between food insecurity and children's health, less is known about the mechanisms linking these conditions.

One potential link between food insecurity and children's health is the role that family structure and proximal processes may play in explaining why some families experience food insecurity. Although the majority of food insecure households are low-income, not all low-income households are food insecure. Drawing from Evans' proposition that for some low-income households, the presence of environmental chaos can increase risk for poor outcomes (Evans, 2004), it was reasoned that lack of mealtime planning and the presence of chaos would predict food security status. In a study of 176 families sampled quarterly over a period of a year, over half of the families were classified as food insecure (60.1%; Fiese, Gundersen, Koester, & Jones, 2016). This remarkably high rate of food insecurity was due to the fact that the families were selected to be in the study if school personnel thought that the children were likely to go hungry over the weekend and would benefit from receiving a backpack of food (Fiese, Gundersen, Koester, & Waxman, 2020). Overall, the investigators found that food insecure households reported more household chaos and less mealtime planning than food secure households. In a logistic regression model predicting food security status and controlling for household income, employment status, and household size it was found that mealtime planning and chaos distinguished food secure from food insecure households. Further, household chaos distinguished very low food secure households from low food secure households with very low food secure households reporting the highest levels of chaos.

Chaos in the home and distractions during meals may serve both as a risk factor and as a signal of stress in the home. Researchers have proposed that chaos in the home is a sign of how adults respond in highly stressed environments and may compromise executive functioning skills (Briant et al., 2017; Deater-Deckard et al., 2009). It is reasonable to speculate that the more distal factors of poverty affect parenting and family routines through a disruption in planning and order. For family mealtimes, this often means a lack of planning, inconsistent and unpredictable timing of meals, and unsettled communication patterns. The effects on nutritional health are often a lack of attention to what and how much children are eating, last minute grab, and go food choices or in some cases not enough food for the entire

family. Future research, practice, and policy efforts are warranted to consider how to reduce chaos in family daily life to improve the health and well-being of children.

Cultural and Globalization Effects on Mealtime Practices and Nutritional Habits

Thus far, family dynamics during mealtimes and effects on children's health have focused primarily on proximal processes such as social interaction patterns and to some degree, more distal effects such as food insecurity. There is also evidence that cultural and globalization effects indirectly affect mealtime practices and nutritional health. This is consistent with the Six-C's model whereby culture and exposure to broader societal influences transact with family and child factors (Fiese et al., 2013; Harrison et al., 2011). To illustrate this point, research that has considered acculturation and effects of globalization on mealtimes and dietary habits is considered.

From a socio-ecological perspective, cultural traditions are often expressed through food and celebrations. Although cultural traditions related to food and mealtimes have positive effects such as strengthening intergenerational ties (Fiese, 2006), under conditions of immigration those traditions can have health consequences. Often referred to as the nutrition transition (Popkin & Udry, 1998), second generation immigrants arriving in the USA and other middle- and high-income countries around the world have transitioned from a balanced diet of plants, grains, fruit, and meat to a diet of sugar sweetened beverages, processed foods, and larger portion sizes. This is particularly evident in young children who immigrate to the USA with their parents (Van Hook, Quiros, Dondero, & Altman, 2018). Hispanic families often endorse the value of sharing meals together (Davis, Cole, Blake, McKenney-Shubert, & Peterson, 2016). However, long work hours in the USA and added household responsibilities for mothers are often cited by U.S. Mexican immigrant families as barriers to sharing meals (McArthur, Anguiano, & Gross, 2004).

To explore how immigration and globalization may affect mealtimes and dietary practices, a qualitative study of 41 Mexican parents (40 mothers, one grandmother) was conducted (Villegas, Hammons, Wiley, Fiese, & Teran-Garcia, [under review](#)). The country of origin for all of the participants was Mexico. Twenty-one (51%) resided in Mexico and 20 (49%) had immigrated to the USA. For those who had immigrated, the average time in the USA was 20 years. Participants took part in focus groups led by Spanish speaking facilitators. The focus group protocol included questions about mealtime routines such as cooking and eating and was based on previous research (Evans et al., 2011; Nepper & Chai, 2016). Three major themes were identified across both groups: (1) Mothers shop and cook the food, but children and fathers command the food; (2) Family meals are different than before, and globalization is a contributing factor; and (3) Family time has shifted to weekend endeavors, eating at restaurants, and eating at fast food chains. Somewhat

surprisingly, there were few differences in the themes across the mothers in Mexico and those who had immigrated to the USA on average 20 years ago.

Globalization can influence dietary habits. We asked mothers who grew up in Mexico to compare their childhood dietary habits with their current dietary practices. Mothers both in the USA and Mexico described how there were more fresh fruits and vegetables on the table when they were growing up than are currently available. In both countries, they described the presence of fast food and processed foods, and less access to fresh vegetables than when they were children.

At both sites, mothers described technology and electronics as distractions during mealtimes. They described an erosion of family time together as children viewed screens during meals and at times, did not sit together at the table. Mothers also commented that they did not understand what the children were doing on their phones and shared this frustration with their own mothers. A sense of isolation appeared to have developed.

The effects of globalization do not affect only immigrant families but can have an effect on children and families remotely. The concept of remote acculturation proposes that individuals can be acculturated psychologically through indirect exposure that results in change in the individual's behaviors and values (Ferguson & Bornstein, 2012). The USA can have a particularly strong influence through imported goods, cable television, other media, and the presence of U.S. branded fast food outlets. Residents of Jamaica were remotely acculturated to U.S. culture and moved toward a type of psychological "Americanization" (Ferguson, 2016). Americanization is associated with watching more U. S. cable television and consuming more U.S. style fast food such as Kentucky Fried Chicken (KFC; Ferguson & Bornstein, 2015). The media landscape in Jamaica is dense with advertisements for unhealthy food choices. An analysis of food advertisements in newspapers and outdoor advertising in Kingston identified that most of the advertisements were for energy dense, highly processed foods, snack foods, and fast food restaurants (Nelson, Ahn, Giray, & Ferguson, 2017). KFC was the most frequent food advertiser.

Remote acculturation can have a significant impact on mealtime behaviors and dietary habits. In a cross-sectional study of Jamaican youth and their mothers, the more adolescent girls were Americanized, the more U.S. cable television they watched and the more unhealthy food they consumed (Ferguson, Muzaffar, Iturbide, Chu, & Gardner, 2018). There was an indirect effect of watching U.S. television on consuming unhealthy food for the more Americanized mothers of girls. For adolescent boys, there was an indirect effect of U.S. cable television viewing on unhealthy food consumption for the more Americanized boys.

In a qualitative report, Jamaican mothers discussed the effects of U.S. culture on diet and mealtimes. Several mothers noted a loss of traditional foods that they had grown up with and their children's desire to eat more American foods such as pasta and pizza (Ferguson & Iturbide, 2015). The mothers considered healthy food as the foods they grew up with and those in a traditional Jamaican diet. American foods and fast food were considered unhealthy. However, Americanized foods were also seen as convenient and useful for busy and working mothers. There was considerable value placed on having meals together as a time to talk and share news of the day.

There was also discussion about television sometimes getting in the way of a peaceful experience.

The effects of globalization on mealtimes have implications for prevention and intervention programming. Rather than consider changes in mealtime patterns a fait accompli, it is possible to emphasize cultural values and raise awareness of media impact on dietary habits. The Abriendo Caminos program is a six-week family-based healthy eating program aimed at reducing obesogenic behaviors among Latinx parents and children (Hammons et al., 2013). The program includes nutrition education to promote healthier eating habits, modules on sharing meals together while reducing conflict at the table and increasing positive communication, and a whole family approach to physical activity. The multi-component program is based on the principle of Mas-e-Menos: a little bit more (fruits and vegetables, physical activity, shared family mealtimes) and a little bit less (sugar sweetened beverages, television viewing, conflict at the table). The culminating event of the program is a Fiesta where program participants share a traditional dish prepared by substituting healthier ingredients for original ones higher in fat or sugar. Preliminary findings from the pilot project indicated that the program is effective in reducing the consumption of sugar sweetened beverages and increasing the consumption of fruits and vegetables (Hammons et al., 2013).

Another approach to addressing globalization effects on nutrition is to increase media literacy and raise awareness of the effects of advertising on food consumption. Media literacy programs seek to raise awareness of how advertisers manipulate consumers and attempt to persuade them to purchase their products (Nelson & Kehr, 2016). The JUS Media? Programme has provided media literacy training to Jamaican youth and their mothers to raise awareness of food advertising and effects on nutrition habits (Ferguson, Fiese, Nelson, & Meeks Gardner, 2019). The team applies a *sub-vertisement* approach whereby teens and their parents take a pre-existing advertisement and make a parody or spoof of the ad to reveal its underlying intent and potential effect on poor health outcomes. This approach is seen as particularly effective in Jamaican culture as it builds upon Jamaican values of cultural critique, resistance of oppression, and self-empowerment (Ferguson et al., 2019).

In sum, globalization, either through immigration or remotely through the dissemination of U.S. products and U.S. cable television, is having a profound effect on dietary habits and mealtime practices around the world. Although cultural influences are typically thought to be more distally tied to mealtime practices, the encroachment of food advertising and fast food restaurants into a global society has reshaped the diet and mealtime practices for considerable numbers of families around the world. Not only does technology have a place at the table, impacting family mealtime interaction, but also the advertised products come to shape identity and food preferences that transform traditional diets. Globalization is a complex phenomenon as it is also embedded in shifting work dynamics and gender roles. For the family dynamics of mealtimes, it is important to recognize that the brief 20-min event reflects not only the desires of those sitting at the table but also pressures evident in society.

Summary and Conclusions

In this brief overview, the dynamics of family mealtimes were reviewed with an emphasis on their relation to children's health and well-being. Drawing from socio-ecological models (Fiese et al., 2013; Harrison et al., 2011), it is proposed that the power of family mealtimes to affect children's health is embedded in larger systems including biological and temperamental systems of the child, community systems that affect access to food, country policies that include federal programs associated with food assistance, and societal influences including globalization.

There are several essential ingredients to a healthy mealtime that can be directly observed. Essential social interactions observed during mealtimes include direct and open communication to demonstrate a genuine concern for family member's feelings and activities; adequate response to negative emotions; and an environment relatively free of distractions. If any one of these elements is disrupted, then there are consequences to children's health and well-being.

A nagging concern in mealtime research is whether these principles or essential ingredients are simply markers of overall positive family functioning. This concern cannot be completely discounted, although several research reports have controlled for general family functioning and other socio-demographic factors when identifying the potentially unique role that sharing meals may play in promoting health and well-being (Fiese et al., 2011, 2016; Fulkerson et al., 2006). The unique contribution of family mealtimes may be considered from the perspective of organized routines that provide structure and predictability to family life. In addition, when repeated over time, these routines come to have meaning and create a symbolic identity for the family in terms of "this is who we are as a group" (Fiese, 2006). With rapid changes in globalization, there is a sense that there is a hominization of diet not only in the USA but also in middle income countries heavily influenced by U.S. exports, including media. The result is often a loss of connection to a broader cultural identity and unique diet across generations.

Future research and practice should explore how families preserve traditions in the face of global change and incorporate healthy mealtime practices free of distractions and full of meaningful conversations. Further, it will be important to consider how proximal processes such as response to negative affect and communication patterns may be influenced by more distal factors such as food insecurity, food advertising, and the growing influence of prepared foods and dining out (Elitzak & Okrent, 2018). To address these multiple layers of influence will require transdisciplinary teams of researchers to integrate a truly cell-to-society approach.

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