

# **Parental Incarceration's Effects on Childhood Eating Patterns**

Ella J. Munizza

Department of Law, Societies, and Justice, University of Washington

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Dr. Katherine Beckett

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## **Abstract**

Research documents the negative impacts of incarceration and poor nutrition on individual, family, and population health, but few studies explore how these seemingly disparate issues may intertwine. Based on the knowledge that children learn to eat and develop lifelong nutritional patterns as part of their families, and that parental incarceration breaks family units apart, I investigate the question: How does a parent's incarceration shape the trajectory of a child's developmental food environment, including meal structure, staple foods, and changes in routine? Based upon current research on parental incarceration, childhood eating patterns, and health outcomes, I predict that parental incarceration will be associated with negative changes in a child's food environment by disrupting previously held family eating routines and by creating additional barriers to healthfully feeding a family. I conduct semi-structured interviews with formerly incarcerated parents or co-parents whose partners are currently imprisoned. Interviews were analyzed for common themes and salient information using NVivo. First, I open coded all interviews to identify preliminary themes. Then I coded a second round to refine my analysis and focus on patterns and relevant information. Analysis of the interviews shows evidence of family eating pattern disruption and constrained choice limiting food options as a result of incarceration. I also found evidence of the positive effects that eating together has for families during and after a period of incarceration. These findings implicate parental incarceration as a potential factor in creating challenges and barriers to feeding a family and disruption of healthy meal patterns for children. My research illuminates how large-scale social phenomena such as mass incarceration can pattern eating behaviors and habits which are known determinants of health outcomes. The conclusion situates this study in the context of Socially Engaged Nutritional Sciences and points

to the need for more research and policy investigating the health impacts incarceration causes for families.

## **Introduction**

The following paper is organized into six sections. (1) A literature review detailing the scope of incarceration and nutrition-related disease in the U.S. and the current research on parental incarceration and family/ childhood eating recommendations; (2) The foundational theories of Socially Engaged Nutritional Sciences (SENS) and the family unit that guided my research; (3) My research question and its place in advancing knowledge on parental incarceration and childhood eating behaviors; (4) Data and methods; (5) Findings; and (6) Discussion, including limitations and implications for future research and policy.

### **I Mass incarceration**

The U.S. incarcerates more individuals per capita than any other country (The Sentencing Project, 2020). Incarceration rates remained steady from the early 1920s until the mid-1970s, but in the 1980s incarceration rates began to spike (Blumstein, 1998, p.129). This trend has continued for the past four decades with the rate of imprisonment now approximately five times higher than it was in 1972 (Garland, 2001, p.5). This distinctly American phenomenon, now commonly known as “mass incarceration”, was defined by David Garland in 2001 as “a rate and size of the prison population that is markedly above the historical and comparative norm for societies of its type” and “when it ceases to be the incarceration of individual offenders and becomes the systemic imprisonment of whole groups of the population” (Garland, 2001, pp.5-6). Currently, 655 per 100,000 individuals, or 2.2 million people, are behind bars in the U.S. (The Sentencing Project, 2020), and these statistics do not account for the number of people who have been formerly incarcerated<sup>1</sup> (Bureau of Justice, 2002), a factor that raises the percent of the population touched by the carceral system.

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<sup>1</sup> According to the most recent statistics available The Bureau of Justice in 2002 reported 95% of all in state prisoners would be released. In 2002 approximately 595,000 individuals were released back into the community.

The causes of mass incarceration are multi-faceted and primarily rooted in policies and practices developed in the 1980s and 90s and they disproportionately targeted the poor and people of color. Both Hispanic and Black individuals are more likely to be imprisoned than Whites. Hispanics are imprisoned at rates 1.4 times higher than Whites and Blacks are imprisoned at rates of 5.1 times higher on average and up to ten times higher in some states (Nellis, 2016). Those of lower socioeconomic status are also more likely to be put behind bars. Data from 2014 revealed that “incarcerated people had a median annual income of \$19,185 prior to their incarceration, which is 41 percent less than non-incarcerated people of similar ages” (Rabuy & Kopf, 2015). Men are also affected at a disparate rate, with the general population split approximately 50 percent women and men, and the behind bars population composed of a staggering 91 percent men and only 9 percent women (Wagner & Rabuy, 2017). Even though women comprise a relatively small amount of those behind bars, their proportion has doubled since 1970 (Wagner & Rabuy, 2017). This gender gap informs studies on parental incarceration because of the differences in rates of paternal compared to maternal incarceration. (Wakefield & Wildeman, 2014, p.34).

Aligned with incarceration trends, the number of parents behind bars has also grown in the past four decades. From 1991 to 2007 the number of parents behind bars increased by 79 percent; rising more rapidly than general incarceration rates (Wiltz, 2016). This means that an increasing number of children will grow up with the experience of parental separation. Today, one out of 12 children (5.7 million nationwide) will have a parent incarcerated during their lifetime (Gotsch, 2018, p.7). According to the Bureau of Justice Statistics from 2008, there were 744,200 fathers and 65,600 mothers in prison during 2007 (Glaze et al., 2008). The burden of parental incarceration is not shared equally among all families. For Black children, one in nine

will have a parent in prison, for Hispanic children it is one in 28, and for White children that number is one in 57 (Wiltz, 2016). Any collateral consequences from parental incarceration will be distributed unequally to children of racial and ethnic minorities.

## **II Nutrition-related health issues**

As incarceration rates rose over the last four decades, a parallel trend emerged in nutrition-related health issues burdening the nation. The distribution of these issues is also disproportionate in the population with ethnic and racial minorities and those with lower socioeconomic status are affected. Obesity, various chronic diseases, and food insecurity all interconnect and relate to an individual's nutritional status.

Obesity is a body mass index (BMI) greater than 30, and severe obesity is a BMI greater than 40. Today, 43 percent of adults are obese, and nine percent of adults are severely obese (Hales et al., 2020). Childhood obesity and overweight are also common. 17 percent of children ages two to 19 are obese and in children, ages 12 to 19 the rate of obesity jumps to 21 percent (National Institute of Health & National Institute of Diabetes and Digestive and Kidney Diseases, n.d.). Within racial/ ethnic groups of adults, obesity prevalence varies. For non-Hispanic Asians the prevalence of obesity is 17 percent, for non-Hispanic Blacks, it is 50 percent, for non-Hispanic Whites, it is 42 percent, and for Hispanics, it is 45 percent (Hales et al., 2020). The disparities emerge between racial/ ethnic categories at age 2. The obesity rates for adolescents 12 to 19 years old mimic the racial/ ethnic disparities seen in adults. The lowest rates of obesity observed in this age group are in Asian girls at 6 percent and the highest in Black girls at 24. (National Institute of Health & National Institute of Diabetes and Digestive and Kidney Diseases, n.d.). Childhood obesity is a risk factor for obesity in adulthood (Price et. al., 2013), necessitating research on determinants like eating behaviors of children on nutritional status.

Multiple chronic conditions are tied to poor nutrition, including type two diabetes, heart attack, stroke, and other cardiovascular diseases. Obesity and poor diet quality are leading risk factors for all of the above and, unsurprisingly, their rates have also risen. Heart disease, cardiovascular disease, and strokes cause one in three U.S. deaths (Centers for Disease Control and Prevention, 2020). Obesity and type two diabetes as well as high cholesterol are nutrition-related risk factors that heighten the chances of stroke and heart attack (Centers for Disease Control and Prevention, 2020). All of these issues are complexly related and hard to disentangle. Obesity heightens the risk for diabetes and all cardiovascular-related illnesses. Diabetes itself is also a risk factor for cardiovascular illness. All issues trace back to nutritional-related causes. The WHO currently recommends lower intakes of salt, saturated fat, processed foods, and added sugars and higher intakes of fiber, fruits, vegetables, and whole foods, as well as caloric balance, as the best dietary practices to mitigate the development of chronic diseases (2020).

Chronic disease prevalence and cause of death affect ethnic and racial minorities far more than White Americans. Diabetes is more common for non-Hispanic Blacks, Native Americans, Hispanics, and Pacific Islanders than non-Hispanic Whites. (Kumanyika, 2006, S10, Davis et al., 2017). Non-Hispanic Blacks in their sixties to eighties suffer from the comorbidities of diabetes and cardiovascular disease and the comorbidities of diabetes and cancer at higher rates than their White counterparts (Davis et al., 2017). Disparities in chronic disease rates between racial/ ethnic groups begin in childhood. While type two diabetes has increased in youth overall since the 1990s, the incidence for White youths is only 4/100,000 and for Black youths, it is 19/100,000 (Price et. al., 2013). Again, nutrition-related health patterning between demographics begins in

childhood and this gap becomes harder to close as individuals age, making childhood interventions a promising solution.

A final nutritional issue plaguing the U.S. is household food insecurity. Food insecurity is defined as a household being “uncertain of having, or unable to acquire, enough food to meet the needs of all their members because they had insufficient money or other resources for food” (U.S. Department of Agriculture & Economic Research Service, 2020). Food insecurity is linked to obesity and poorer health outcomes in both adult women and children (Kumanyika, 2006, p.S12, Price et. al., 2013). People cope with low food security in a variety of ways depending on the severity of insecurity. This can include going on food assistance programs, lowering quality or variety in one’s diet, or disrupting overall food intake (U.S. Department of Agriculture & Economic Research Service, 2020) all of which compromise nutritional status. While obesity is popularly conceived as related to overconsumption of calories, it is also linked to consumption of “empty calories” and irregular and unpredictable eating patterns (Kumanyika, 2006, p. S12, Price et. al., 2013).

While food insecurity has steadily declined over the past decade it is still a marked issue in the U.S. and some groups of the population are more likely to experience food insecurity than others. In 2019, 11 percent of households were food insecure, but this number varies widely by demographic. In households with children, food insecurity was at 14 percent; if the children were under age six it was 15 percent. A staggering 29 percent of households with a single mother were food insecure and households with a single father had a 15 percent food insecurity rate; highly salient information when examining parental incarceration. Food insecurity rates also vary by race/ethnicity of the household and socioeconomic status. Black, non-Hispanic American households suffered from food insecurity at the rate of 19 percent and Hispanic households at a



rate of 16 percent. In houses below 185 percent of the poverty line, a staggering 28 percent suffered from food insecurity (U.S. Department of Agriculture & Economic Research Service, 2020).

### **III Recommended eating patterns for families and their children**

As previously described, ample research ties nutritional status and food consumption patterns to the development or prevention of many health outcomes and chronic diseases. How adults develop eating patterns, food preferences, and make decisions about food are influenced by a complex web of factors including time, stress, finances, and taste preferences. The influential factor relevant in this study is the development of eating behaviors and health outcomes through childhood eating experiences (Ventura, 2017).

A substantial body of literature in the social and nutritional sciences illuminate how childhood eating experiences shape adult food choices and nutritional outcomes. Both disciplines tie specific eating practices to mental, physical, and social outcomes later in life. Due to their developmental state, children inherently lack autonomy over their food choices. Instead, their social sphere and environment play a dominant role in shaping their choices, and the family unit is a large portion of that. In this section, relevant research on the healthy eating practices of breastfeeding, parental modeling and control, and family meal sharing, for children and families will be reviewed.

Breastfeeding or formula feeding is the seminal eating experience for a child and is inextricably tied to their family environment. There is overwhelming agreement that breastfeeding is the optimal form of feeding newborns through their infancy. Tied to a wide array of health outcomes, exclusive breastfeeding for the first six months is recommended as best practice by the WHO, the Center for Disease Control (CDC), and the American Academy of

Pediatrics (AAP). At six months, solid food may be introduced and complementary breastfeeding can proceed for up to two years of age (WHO, 2021, AAP 2012).

The science behind these recommendations is robust with immediate and long-term health benefits for the child and mother. Both infants and mothers who breastfeed have lower rates of obesity, diabetes type one and two, hypertension, cardiovascular disease, hyperlipidemia, and some types of cancer. Cognitive development is positively related to breastfeeding as well (Binns et. al. 2016). Associations have been found between breastfeeding and a greater variety of healthy food consumption for children at ages two, three, and four, and is a proposed intervention to achieve higher childhood vegetable consumption (Ventura, 2017).

Compared to bottle feeding, breastfeeding promotes maternal awareness of infant hunger and fullness cues, causing the baby to practice appetite regulation from a young age (Venura, 2017). In the later stages of breastfeeding, during the transition to solid food, baby-led weaning is associated with a higher response to satiety and less likelihood of being overweight for the child (Scaglioni et al., 2018). Hunger and fullness cues and internal regulation both contribute to dietary health status for children and adults.

Parental modeling of healthy eating behaviors and the control that parents possess over foods available in the home are predictors of a child's food intake from infancy through the teenage years. In a 15 month study of 13-19-year-olds, researchers found that parental modeling of healthy eating behaviors and physical activity influenced children's BMIs through diet and exercise change (Zrychta et. al., 2016). In younger children 18 months to 8 years, the Parental Modeling of Eating Behaviors Scale (PARM), was developed to inquire how parental modeling influenced younger children. Using PARM researchers consistently found that when mothers unintentionally modeled food behaviors this had a greater influence on the children's food

behaviors than that of verbal instruction. (Palfreyman et. al. 2014 & 2015). The role of parental modeling on eating habits can only occur if eating together is a regular activity, part of the meal sharing habits that are also beneficial.

In measuring the effectiveness of parental control over children's eating patterns, findings show some approaches have better outcomes than others. Researchers conclude that some control is beneficial due to obesogenic environmental factors (Scaglioni et al., 2018, 706-707). Covert forms of control such as what foods are available in the house and the food environments they create are control methods that children cannot as easily sense (Scaglioni et. al., 706). What foods are regularly available in the home play a large part in what a child regularly consumes.

Eating together as a family is a final food pattern proven to increase positive health and wellness outcomes for children. At the most basic level, the family meal is a physical and temporal space where family members interact, generating and playing out social dynamics. Research shows that the family meal setting is a space where rules are imposed, behavior is managed, and general interaction occurs; making it an important social component in a child's life. This practice of meal sharing, and interaction during the meal, is linked to childhood weight and development of eating patterns (Scaglioni et al., 2018). Family meal-sharing is linked to increased fruit and vegetable consumption and closer alignment to dietary recommendations for food group consumption (Pyper et al., 2016). Highlighting the lasting impact of family meal patterns, children who frequently share breakfast with their family at age 10 are more likely to eat breakfast regularly at age 16. As young adults, those who frequently shared family meals during adolescence ate more fruits and vegetables than their peers who rarely shared family meals. A caveat to these findings is that the benefits are greatly reduced when meals are shared

while simultaneously watching television (Scaglioni et al., 2018). This is a result of less positive interaction during the meals and/ or distraction which can lead to unattuned eating.

Psychosocial outcomes are also linked to family meal sharing in childhood. In a synthesis of research on psychosocial outcomes compared to family meal frequency, researchers concluded that “in general, frequent family meals were inversely associated with disordered eating, alcohol and substance use, violent behavior, and feelings of depression or thoughts of suicide” and “there was a positive relationship between frequent family meals and increased self-esteem and commitment to learning or a higher grade point average” (Harrison et al., 2015).

Just as breastfeeding has benefits for both mother and child, the benefits of eating together as a family also apply to the parents. Fruit and vegetable intake for both mothers and fathers increased with the number of family meals shared per week. Mothers reported less binge eating and dieting behaviors when sharing family meals seven times a week compared to only one or two, and fathers who shared family meals seven times a week reported far less fast food consumption than did fathers only sharing one family meal a week (Berge et al., 2012).

#### **IV Collateral consequences for families and children**

The intersection between childhood eating environments and incarceration occurs when a parent is put behind bars. To reiterate, 5.7 million children in America will have a parent incarcerated during their lifetime (Gotsch, 2018, p.7). Research is conclusive that having a parent incarcerated produces negative consequences for children (Wakefield et al., 2016, p.10). Most of the information available on parental incarceration draws from quantitative work with survey data. This is advantageous in proving the connection between a parent’s incarceration and children’s health and the wide scope of the issue, but it does not answer questions on the causal mechanisms that lead to this connection.

Parental Incarceration has been linked to poor physical and mental health outcomes for children. Both the National Survey of Children's Health (NSCH) and the National Survey of Adolescent Health (Add Health) show that:

*among 0- to 17-year- old children, parental incarceration was found to be associated with fair or poor overall health, learning disabilities, developmental delays, speech or other language problems, asthma, obesity, activity limitations, and an array of mental health problems, including attention deficit disorder/attention deficit hyperactivity disorder, depression, anxiety, and behavioral or conduct problems.... researchers suggested that paternal incarceration is associated with high cholesterol levels, asthma, migraines, depression, posttraumatic stress disorder, anxiety, human immunodeficiency virus/acquired immunodeficiency syndrome, and fair or poor overall health in young adulthood. This research also suggested that maternal incarceration is associated with depression (Wildeman et al., 2018, p.149).*

An additional study using the Pregnancy Risk Assessment Monitoring System (PRAMS) run by the CDC found that parental incarceration was associated with 45 percent higher odds of infant mortality (Wakefield & Wildeman, 2014, pp.105-108). In adolescents, maternal incarceration negatively impacts sleep duration and paternal incarceration increases sleep issues and worsens sleep duration (Jackson & Vaughn, 2017, p.213). On the behavioral scale, Wakefield and Wildeman use the Project on Human Development in Chicago Neighborhoods (PHDCN) and the Fragile Families and Child Well-Being Study (FFCWS) data and determine that children with incarcerated fathers had significantly more internalized and externalized emotional and behavioral problems than those without (2014, p.77). A father's incarceration is associated with lower teacher evaluations, higher grade repetition, lower grade point averages in school, and lower chances of college transition (Wildeman et al., 2018, p.150).

The majority of the research that has been done specifically on children's nutritional outcomes also comes from survey data. Using Add Health data, researchers

found that parental incarceration is associated with increased BMI for girls and that Black and Hispanic girls were more negatively affected. A study using the FFCWS found that five-year-olds living with their fathers before their dad's incarceration had increased food insecurity following his sentence (Wildeman et al., 2018, p.149). Further evidence of the association between parental incarceration and food insecurity comes from a 2018 study that conclusively found a "positive and significant association remained between prior incarceration and having low access to healthy food retailers." These researchers concluded that "because approximately 2.6 million children had at least one parent incarcerated in 2012, there may be ripple effects for health and dietary behavior of children and family members of incarcerated individuals," encouraging further research on the topic (Testa, 2018, pp.676, 677).

The only conclusive work linking parental incarceration with eating behaviors is Jackson and Vaughn's analysis of FFCWS data. They found a direct connection between paternal and maternal incarceration and childhood eating behaviors. They were able to link parental incarceration with increased consumption of salty snacks, sweets, and soda. Maternal incarceration was additionally related to starchy food consumption while paternal incarceration was associated with increased fast food consumption. (2017, p. 213). The researcher's stated that "specific mechanisms are unresolved" although they speculate stress caused by the absence of a parent could be a contributing cause. (p. 215).

A final noteworthy study found that females with an incarcerated family member had an increased risk of cardiovascular health issues which are closely linked to nutritional status. These included heart attack, stroke, obesity, and general poor health (Lee et al., 2014, pp. 223-224). While not directly covering health outcomes for children, many of these women are mothers and

they likely share a food environment with their children, therefore, influencing their children's eating patterns.

### Theory

Socially Engaged Nutritional Sciences (SENS) is the overarching theory guiding my research. The nutrition field has undergone important changes, developing a research focus on the impact of structural factors on nutritional outcomes. Most of this work investigates the impact of the physical food environment (food deserts, food advertisements, grocery store access, etc.) or, socioeconomic factors, that contribute to nutritional inequalities. (Schubert et al., 2011, pp. 354-355). However, Schubert et. al. explain why research on structural barriers only tells part of the story:

*While [environmental and socioeconomic research are] critical in building a framework for understanding the multiple social structures, [they] do not provide, in themselves, a complete picture. These perspectives tell us about the conditions that shape food choice but illustrate neither the experience of living under these conditions nor how different individuals and households respond differently to similar conditions (2011, p.355).*

SENS fills this gap by “recogniz[ing] the narratives behind diets and construct[ing] them as an outcome of a complex set of processes, leading to potentially more effective interventions” (Schubert et al., 2011, p.355). The goal of this study is to integrate SENS into the literature on parental incarceration, examining how family eating habits adapt in reaction to the structural barriers of incarceration.

Delormier et. al. emphasize how research “underestimates the extent to which eating is embedded in the flow of day-to-day life. People's eating patterns form in relation to others, alongside everyday activities that take place in family groups, work, and school. Eating does involve isolated choice, but it is choice conditioned by the context in which it occurs” (2009,

p.217). My choice to conduct interviews with participants about how their and their children's eating behaviors changed over time in the context of incarceration should capture the nuanced ways that nutrition operates in real life. Eating is much more a product of routines and small choices embedded structure and less an individual variable in a person's life.

I deliberately selected the family unit to examine the connection between incarceration and nutrition for its central role in both issues. The family unit is inextricably linked to incarceration when ripple effects occur during a parent's sentence. It is simultaneously central to nutrition through its role as the main social environment in which children learn to eat. Many researchers underscore the importance and benefits of studying nutrition and eating as part of a family process, citing how food is a central component of family life embedded in relationships at home with parents and that research needs to include more information about these dynamics (Delormier et al., 2009, pp. 219-220). Noting the call for more SENS research, the strengths of studying eating in a family unit, and the gaps in the parental incarceration literature on the causal mechanisms of nutritional outcomes, I developed the following research questions and study design.

### **Research Question**

In this study, I build off the already established work linking parental incarceration and childhood nutrition by utilizing in-depth interviews to capture how the participants and their families react(ed) in real-time to the social structural barrier of incarceration.

I specifically investigate: *How does a parent's incarceration shape the trajectory of a child's developmental food environment, including meal structure, staple foods, and changes in routine?* I seek to identify the mechanisms by which parental incarceration affects nutritional and health outcomes among the children of incarcerated parents. Based upon current research on



parental incarceration and childhood eating patterns and health outcomes, I predict that parental incarceration will produce negative changes in a child's food environment by disrupting previously held family eating routines and by creating additional barriers to healthfully feeding a family.

## **Data and Methods**

### **Recruitment**

Participants were recruited using combined methods and interviewed over a four-month period. In October, I conducted initial outreach to local organizations in Washington that work with incarcerated individuals and their families. These included Civil Survival, the Incarcerated Parents Project, Protein for All, and the Post-Prison Education Program. With the permission of program directors I distributed recruitment materials via social media or email.<sup>2</sup> From this initial round of recruitment I enlisted one interviewee and used snowball sampling to recruit one more participant. I interviewed both of them by the end of December and continued attempting snowball sampling. Throughout the recruitment and interview process, I consistently asked participants if they knew anyone else who would be interested. This method only yielded one completed interview.

In January I began the second round of intensive recruitment when another participant connected me with the Family Support Group for Washington DOC prisoners on Facebook. There I was able to post another recruitment statement and reach a wider audience. In this stage, I was in email correspondence with 15 possible participants. This involved a three-step process: an initial informational email, a scheduling email including their pre-interview survey, and then a

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<sup>2</sup> See appendix for example of recruitment post

confirmation email. For each email sent, if no response was received within five days, a follow-up was sent. This second round of recruitment resulted in four more interviews.<sup>3</sup>

To participate in the study an individual had to (a) be a formerly incarcerated individual or a partner of a currently or formerly incarcerated individual with children; (b) have/ had children under the ages of 18 during the incarceration period; (c) could not be currently incarcerated, and (d) had to be 18 years or older. No other criteria such as age, socioeconomic status, geographic location within the state, sentence length, or race/ ethnicity were used to select participants. Challenges to recruitment and limitations from sampling are detailed later in the discussion section.

### **Interview protocol**

Having not used parameters for sentencing length or children's ages during recruitment, I sent each participant a pre-interview survey that included questions on their child(ren)'s age(s) before, during, and after (if applicable) the incarceration period, as well as who their child(ren) lived with at that time.<sup>4</sup> These surveys helped me to prepare before the interview. For example, questions on breastfeeding were relevant in families where the children were young during incarceration, whereas questions on meal sharing or current habits were more relevant for those with older children. The survey also asked about the demographic characteristics of the participant.

Interview questions were developed based on the literature review findings, SENS theory, and the family unit as a social structure. I developed my questions and then had them reviewed by both a professor in the field of criminal law and a nutrition professor with expertise in eating behaviors. Once I received feedback, the final interview protocol included five sections of

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<sup>3</sup> See appendix for example of participant scheduling email

<sup>4</sup> See appendix for complete list of survey questions

questions. The first three sections followed the same pattern asking about family eating habits, routines, and relationships with food before, during, and if applicable, after incarceration. Some of the specific probes included were about meal sharing, staple foods, breastfeeding, and homemade meals compared to dining out.<sup>5</sup> In the fourth section I asked specifically about barriers faced to feeding their family. The fifth section asked questions about what they would like to see change to make eating healthy easier for themselves and their children.

Interviews took participants anywhere between 25 minutes and one hour to complete depending on their particular responsiveness to questioning and how many of the questions applied to their situation. Interviews were conducted either via Zoom or by phone and recorded on a handheld device for privacy and were then transcribed. I manually transcribed the first two interviews, but due to time constraints, the final round interviews were transcribed by otter.ai. I then read and cleaned them for correctness and flow. All interviewees were given pseudonyms as well as any other names mentioned in the interviews.

### **Analysis**

Once interviews were transcribed I uploaded them to NVivo to organize my work and keep track of information in the interviews. Before coding, I had already reread or listened to the interviews once during transcription and became more familiar with all of the participant's information at that time. For each participant's interview, I generated a "case" so I could keep track of all the data relevant to each participant. I started with a round of open coding where I generated as many nodes as needed to cover all the material in each interview. This involved closely reading the text and categorizing it using my research question and the questions I had asked in the interview to guide me. This first round produced many nodes; but many were interrelated, vague, or did not help me in noticing key points in the transcripts.

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<sup>5</sup> See appendix for interview protocol

For the second round, I began by noting general patterns that emerged in the first round. These included the use of food assistance, financial constraints, changes from before, during, and after the incarceration period, “fend for yourself” patterns in children, visitation, and meal sharing. I generated nodes for each of these. Then I conceptualized the formatting for coding so that I could search my interviews for key points related to change in eating over time as it related to incarceration for children or the family unit. I created four main nodes to help me organize the rest of my coding. These include: filtering information by time (before, during, or after the period of incarceration); if it applied to the parent(s), child(ren), or, the whole family; the sentiments and feeling participants expressed when talking about a subject; and finally if they were noting a specific change over time relevant to food and eating.<sup>6</sup> From this framework I could reread the interviews for the third time and comfortably and confidently sort their content into the criteria I had designated in an organized way.

After I had coded all the interviews I used the frequency of references in nodes, notes from coding stripe co-occurrences of codes<sup>7</sup>. This is a method of visualizing where coded themes overlap in NVivo to see what codes are most prominent and which ones overlap with each other in the text. I also relied on my familiarity with interviewees’ stories to generate my final findings. I originally attempted running matrix queries, but due to the small size of my sample and its heterogeneity, this process of analysis was not effective. Instead, I returned to manually identifying themes through the process described above and used NVivo as more of a tool in aiding my analysis than a coding software.

The goal of my analysis process was to convey the information participants shared with me in a comprehensible format while still preserving the original tone, meaning, context that

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<sup>6</sup> See appendix for complete codebook including subnodes, frequency of references, and coding criteria

<sup>7</sup> See appendix for example of interview with coding stripes

participants had when speaking with me. I aimed to center their experiences and glean patterns that arose between different participants' stories to gain new insights into how families adapt and change eating patterns in response as it relates to incarceration. In the next section I present the results of this process. They include themes that arose across multiple interviews and also speak to the experience of each individual and their family's unique adaptations and changes in navigating food through incarceration.

**Participant Survey Information: Demographics, Incarceration History, Family Information**

Participant	Maggie	Lisa	Tommy	Amy	Claire	Laura
Age	48	48	39	No Data	No Data	No Data
Gender Pronouns	She/Her	She/Her	He/ Him	She/ Her	She/ Her	She/ Her
Racial identity	White	White and Asian	White	White	No Data	Black or African American
Ethnicity	Non-Hispanic or Latinx	Non-Hispanic or Latinx	Non-Hispanic or Latinx	Non-Hispanic or Latinx	Non-Hispanic or Latinx	Non-Hispanic or Latinx
Currently receives food assistance	No	No	No	Yes	No	No
If yes, what program(s)				WIC		
Number of children	3	2	3	1	2	1
Age(s)/ Gender(s)	Boy 29, Girl 27, Girl 14	Boy, 25, Boy 28	Boy, 19, Girl, 17. Boy, 15	Boy, 2 ½	Girl, 11, Girl 8	Boy, 11
Number of children before sentence	2 and then 3	2	3	1	2	Pregnant
Current relationship status	Married but living separately	Married	Married	Married	Married	Married
Co-parenting	Yes	Yes	Yes	Yes	Yes	Yes
Relationship status before incarceration	Dependent on incarceration period.	Married	Married	Married	Married	Married
Incarcerated more than once	Yes	Yes	No	Her husband, yes	Her husband, yes	No data
If yes, most recent period.	2003, 2009, 2011, 2012	2011	2009	2018	2013	2010
Length of the most recent sentence.	6 months	18 months	8.5 years	Husband is serving an ongoing sentence until approx 2027	Husband served 4 years 2 months	Husband is serving an ongoing sentence, has been 11 years

Primary caregiver during incarceration period	Daughter's dad	Oldest was a runaway, youngest lived with his dad.	Their mother	Amy	Claire	Laura
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### Findings

Analysis of the interviews produced three main findings. First, in a majority of the cases, eating patterns and habits for children and the family unit were negatively altered during the incarceration period. This occurred through two primary pathways: financial constraints and/or changes in eating routines and habits. Second, the food options and restrictions during visitation in WA DOC facilities were described as negative, unhealthy, and unhelpful by several participants. Finally, in all cases in which the parent had completed their sentence and was reunited with family, they reported improvements in their own and their children's eating habits compared to the incarceration period. They cited food and eating together as a positive part of life for them and their families. Two participants had husbands currently incarcerated; one expressed sentiments of loss and wanted food as a point of connection for their family, the other felt indifferent.

### Financial Constraints and Food Assistance

Multiple participants described the incarceration of either themselves or their partner as negatively impacting the financial status of the family, thus limiting their food options. In some cases this involved the use of food assistance programs. In others, it meant making decisions based on limited financial means. In all instances, the participants directly attributed this change to the incarceration of themselves or their partner.

Amy is the mother of a two-year-old boy. Her husband was incarcerated with over a ten year sentence when their son was just four months old. Prior to the incarceration period, Amy described sharing almost every meal as a family. She and her husband often cooked breakfasts of

meats, eggs, and vegetables. Her husband was the main cook and grocery shopper during the late stages of Amy's pregnancy and early nursing period. In her interview, she described changes around eating and feeding her baby and their transition to food assistance programs after her husband's absence. Amy had limited food options on the program that did not fit her or her child's previous dietary pattern and also had no awareness of the program at the onset of the incarceration period when she struggled financially.

***Amy:** We ended up going on WIC... Like, the level of dairy is insane on WIC. And I don't eat that much dairy, generally speaking, but I couldn't afford to do other things, and I had this source of calories. So I needed to eat that source of calories. So I did and I still do.... just straight cow's milk was just tearing up my system so I just felt kind of gross because I don't think my system wanted to eat that much dairy.*

***Interviewer:** And did you go on WIC -was that directly influenced by your husband's incarceration?*

***Amy:** Yeah, I mean, I didn't know, I guess I didn't know about or wasn't able to research WIC until my kid was about six months old. But it got to a point where I was like, I literally have no idea how I'm gonna, like, afford to feed us or put gas in the car. So like, I have to figure something else out. And so I went on WIC and EBT.*

Claire is a mother of two daughters ages eight and eleven. Her husband, their father, was incarcerated from 2013 until 2017 starting when the girls were one year and four years old. During his incarceration period, the family dynamics and eating habits changed drastically. They started with a period of some food insecurity and Claire felt too unknowledgeable in her cooking abilities to be able to feed her family the way she would have liked. Later, their family went through a robust period of transformation into a beneficial relationship with food for the whole family, but at the onset of the incarceration period feeding her family became more challenging and restricted.



**Interviewer:** *Were you ever on any sort of food benefits during any period of time?*

**Claire:** *Yes. I was on when they were small. And I was just alone. I was on food stamps and WIC in the beginning.*

**Interviewer:** *And food stamps. And that was directly associated probably with a parent being removed from the household, like an income?*

**Claire:** *Yes. Mm-hmm.*

**Interviewer:** *And can you tell me about how that impacted your kids and your eating at the time?*

**Claire:** *There was restricted options or I had to budget I had less money to again buy things that were more healthy. More convenience foods were bought. Because they were cheaper, and I could get more like soups and you know, frozen stuff like a frozen lasagna or like a frozen thing...So yeah, it definitely impacted it because I didn't have the money to, I knew kind of what I wanted to feed the family, but I wasn't able to do it.*

For both Claire and Amy, the absence of their co-parent and partner led to reliance on food support programs. This was a helpful resource in preventing hunger but also restricted their food options and constrained their dietary choices. Both mothers had visions of how they wanted to feed their young children and knowledge about the nutritional benefits of unprocessed foods. With the financial losses they incurred their ability to make the healthy choice for their kids and themselves was made harder.

Another participant, Tommy, has two sons and a daughter who were three, five, and seven years old at the start of his incarceration from 2009 until 2017. During that time his children remained with their mother and his then-wife, Sophia. Tommy told me that before his incarceration the family shared dinner 90 percent of the time and that he did most of the homecooking. He also explained that staple foods in the house were bread, chicken nuggets, and other frozen snacks for the kids due to his busy work schedule. Later, he described that his family's entrance into food assistance programs stemmed from his incarceration. Because he was

the one who had been incarcerated, he could not personally elaborate on the changes the food programs caused to eating patterns for his family, but did establish their entrance into the assistance programs as a consequence of his imprisonment for the family.

**Interviewer:** *Do you know if their eating changed at all, because of your absence because of your incarceration?*

**Tommy:** *I really can't answer that question. I don't know. But I do know that I was the main provider, I was the provider pretty much that [Sophia] really wasn't working when when I left and so I know that she went got food stamps and try to do the best she can. But I don't know what it was.*

**Interviewer:** *Okay, so she was directly going on a food program was kind of a pretty direct consequence of your removal?*

**Tommy:** *Yeah.*

### **Negative Impacts on Eating Patterns**

Separate from the financial losses incurred by the families interviewed, four of the participants reported changes in their children's or family's eating patterns with alterations in the type and quality of foods consumed and the consistency in which they shared meals as a result of parental incarceration. Lisa, Tommy, and Maggie shared about exclusively negative changes to their families' eating during and as a result of the incarceration period. But for one family, Claire's, their family's nutrition and relationship with eating morphed during the incarceration period with both negative and positive outcomes.

Lisa, a mother of two sons, was incarcerated on and off between 2008 and 2011, when she served her last sentence. Her sons were 13 and 16 when her incarceration cycle began. Before her incarceration, she described their family's eating habits as consisting of regular shared homemade meals four times a week in combination with take-out or fast food when they had a busy schedule. After she was incarcerated, her youngest son lived with his father and grandfather or with his father and his father's girlfriend. During this time he was often entirely in charge of his food and there was less structure provided than before. While meals were eaten together

when staying with his grandfather, family meals were rare when he stayed with his father and his father's girlfriend family:

**Lisa:** *I was actually talking to my youngest about this the other day. He would eat a lot of peanut butter sandwiches cause that was his staple. I don't know. It didn't really sound like they did meals together you know, cause his dad lived with his girlfriend and her kids and it doesn't sound like they did meals often at least.... when it was his dad and his dad's girlfriend it wasn't really a family meal setting.*

**Interviewer:** *And you said he ate a lot of peanut butter sandwiches, was that just, did he tell you, that it was just him making it for himself when he needed something?*

**Lisa:** *So he makes it sound like he had to pretty much fend for himself, ok, yeah, and he didn't want to make a mess.*

When I asked Tommy if eating patterns in their household changed for his three kids during his incarceration his answer closely followed the pattern Lisa described. There was reduced consistency of family mealtimes and more need of self-sufficiency in food preparation and eating from the children.

*It was something that is kind of like a fend for yourself kind of thing sometimes. Okay... I know that [my wife] was going through a lot of depression issues at the time, and still is kind of, but she's also very busy and kind of made herself busy in other areas to neglect certain things, I guess, or certain things got neglected through that process... and so the kids made a lot of... Peanut butter and jelly sandwiches, stuff like that.*

Maggie is a middle-aged mother of two daughters and one son. In our interview, we focused on her relationship with her youngest daughter, a 15-year old I will call Emily, who lives with her today. She talked about before and during one of her periods of incarceration when her daughter was a toddler. Before she was incarcerated meals were shared every time with Maggie, Emily, and Emily's father. Maggie had control and influence over her daughter's diet and provided many homemade meals and fresh whole foods. She fondly described making a

homemade vegan carob cake for Emily's birthday and described and her daughter's transition to solid foods:

*I used to get her those little like net bags that babies hold onto, they are a little ring, and you put a piece of fruit in there so I would give her bananas and strawberries and things like that. That is probably the most memorable food I can remember feeding her as I was sort of transitioning her.*

When Maggie was incarcerated her daughter lived with her father. Maggie shared that she and Emily's father always differed on ideas around healthy foods and that he opted for more processed meals. He provided Emily with a relatively healthy diet and lots of fruit but also increased the amounts of processed foods they ate. Maggie also noted that it was no longer a pattern for them to eat together and that she knew about half the time Emily's food was left at the table for her to eat as she pleased. Maggie described the transition in foods below:

*His cooking expertise typically exists in a microwaveable box so I know she ate a lot of chicken nuggets and macaroni and cheese stuff, ... and he fed her a lot of fruit; like tons and tons of fruit. Ok - so she probably really existed a lot on fruit and microwaveable meals.*

### **Food and Visitation**

Another prevalent theme across participants' experiences was visitation. During incarceration, visitation is the only access that families have to face-to-face interaction and shared time. Many participants brought up the topic voluntarily and identified it as a memorable part of their experience. Three of the four participants who spoke on the subject described the experience of visitation, specifically the foods available, as low quality. The food environment for visitation in DOC facilities consists only of highly processed vending machine food and provides little accommodation for breastfeeding mothers.

Amy was the only participant I interviewed whose child was in an exclusive breastfeeding stage at the time of a parent's imprisonment. Amy described the difficult process

she would undertake each time she visited her husband during the breastfeeding stage. DOC facilities had no capacity for her to pump and did not allow her to do so while she visited.

*I would have to leave my visit with my husband to go pump, and then come back. It's very long trips so I'd have to pump in the car... I'd have to pump on the way down because I lived at that time, I lived almost four hours from the prison... I would nurse my kid, drop him off, then about two hours in I would set up the pump. So I can pump like while driving... And then right when I got there, I would pump again, before I went in to visit. And then about three hours in I would pump again ... You can't sit on the ground to pump so I would have to drive off. I'd have to drive like 10 or 15 minutes away, stop again, set up to pump in the car, then to drive back. So that was hard.*

In the three other cases where visitation was discussed, two described the experience and the food in negative terms. They discussed the unhealthy food environment and explained that the atmosphere is unconducive to valuable time with a loved one. Laura, the mother of an 11-year-old son whose father, her husband, has been incarcerated since she was pregnant, and Tommy, both described the limited and unnutritious food options available for their families when visiting.

**Tommy:** *The food options were vending machine food. It's probably worse for you as far as health-wise, as far as quality of food, because it's very processed down. And it's probably been sitting on a shelf for a very long time.*

**Laura:** *During visits, I ate the chips, the soda, the candy, for the most part, until I left, and then we would grab fast food on the way home.*

**Interviewer:** *Is it food exclusively from the vending machines? Or are there other options?*

**Laura:** *No not at all.*

**Interviewer:** *Okay. And then what is the kind of tone and feeling during the times of the visitations?*

**Laura:** *I mean, from my standpoint, I feel like I'm incarcerated like you're getting looked at like, you don't do much or say too much to talk to him. Cause you might get talked to and I don't like getting talked to. Can't be easy. Yeah.*

Claire, her husband, and their daughters had a unique experience with visitation during his sentence that served as a turning point for their family's health and functioning. Her husband was part of a unique program involving "extended family visits" offered to limited prisoners in WA State facilities. This program included overnight stays in a replicated home environment with his family once a month for two nights. This program began after the first year of his sentence in which Claire was learning how to be a new mother and cook for her family while being constrained by finances. Claire characterized her family as "blessed" in their ability to spend time together in that setting during the incarceration period compared to the more typical experiences families have with WA DOC.

***Claire:** I mean, honestly, like we learned to cook as a family probably at the prison, I would I could almost say.*

***Interviewer:** Okay, do you feel like that was a beneficial experience for you and your family?*

***Claire:** Yes, absolutely.*

***Interviewer:** How did that feel? Like what was the mood for you and your kids and for him during those times?*

***Claire:** Oh, it was like, it was amazing...Looking at it now because food was like the only thing to do over there... and then it was a family activity, we were learning teamwork. He was able to see how the girls would not eat certain things, and, you know, cook with little kids, and like, we would make a great meal...so he got to see the full parenting kind of thing. We cleaned up together, you know, he did the dishes while I cooked, which is something that still happens every night.... But yeah, the food, I would say is what tied us together.*

### **Food as Part of Family After Incarceration**

One of the most remarkable findings was how all but one participant freely spoke of food as a positive or even central part of their family's life together after they were released. In one participant's case, her partner was still in prison and she spoke of eating as a family with great desire, longing, and hope for the future. One participant and her family, Claire, had a particularly

unique experience with food as part of their family's trajectory from before, during, and after the incarceration period.

Lisa and Tommy again had similar experiences with food and family throughout their lives. Both have multiple children who are now adults and are no longer with their children's biological other parent after incarceration. They each describe the environment and atmosphere while sharing meals with their children as a point of connection and health, and do so on a semi-regular basis. They each specifically highlight conversing while sharing food, one of the beneficial elements in eating together.

**Tommy:** *I love cooking for em' when they come over.... Where we eat is usually at the dinner table. It's not like it's a formal kind of eating thing. It's just the best place to eat. I think, you know, we're all together, looking at each other and conversing with each other and eating. To me, that's an important part of relationship and just being healthy.*

**Lisa:** *A lot of the time we'll sit around the table and eat, it's pretty cool. We'll sit around in the kitchen and talk and me and my husband and him um, it can be like, pizza, or it can be like breakfast um, you know, so it can be pretty healthy or it can be like doughnuts or something. But we do spend at least two or three days out of the week where we get to hang out and have conversations.*

In Maggie's interview, she shared openly and often about her history of substance abuse and addiction and how it contributed to her revolving stints in and out of jail and prison for over a decade. She raised three children over the years and her youngest is now 15 and lives with her. Maggie often talked about how, for herself, food and eating clean or healthy was a way of trying to repair and give back to her body after the damage she had caused over the years. I asked her if her mental frame around drugs and food influenced the way she feeds her daughter today and she clearly said it did and it is a way she tries her best at parenting her child.

*I have two other kids. One just got out of prison after doing almost 10 years. And I have a 27-year-old who has struggled with addiction and things like that even*

*though she'll never admit that's what it is... And so she's [my youngest] my last opportunity at trying to get something right. So you know, she didn't have a really easy go of things. I mean none of my kids did... so all of the things that I thought would have been good for my children, I try to implement with this one, and so yeah it's very hard when you've failed yourself in so many ways and you've made promises about how you're gonna be with your children and then you fail them too, and so umm yeah. I'm just trying to not fail her anymore.*

Claire's family experienced a unique trajectory in their eating patterns. As introduced in the visitation section of this paper, their family had access to extended family visits during her husband's stay and through that experience, food was a central component in their bonding and time spent together. That experience has continued to shape their family's eating habits and food philosophies post-release. Claire told me of how the program involved following transitional steps after prison release when her husband was home. Some were family-centered and involved in building healthy eating habits. Here Claire describes a bit about their family's foodways and trajectories after incarceration and the healthy food environment they now strive to achieve in their home for themselves and their daughters.

*I would say we eat together as a family six nights a week, there might be like, a night or like Saturday or like, maybe we'll go out you know that. But we now do it regularly. So I would say our relationship with food is actually really good. But in the last like, four years, you know, we've also got I've gotten really good at cooking. So there's that And I would say that overall health has become a priority. You know, just in general.*

Laura and Amy are the two participants with partners still incarcerated; both of whom are serving ongoing sentences without clear release dates. How Laura and Amy feel about their partner's absence in the context of their family's food dynamic are completely different. When I asked Laura if she thought that the absence of her husband had a negative effect on her son's eating routines she was adamant it did not:



*No, because he's never experienced it as far as at home. Like he's experienced, as far as being incarcerated. So I don't think he's missed out on anything, because he doesn't know that part of it, like being within the home. Like we eat within incarceration, and then we leave.*

Amy's response to my question on what changes she would like to see for her and her family's ability to eat was much more emotionally charged and exposed the mental pain that separation can cause for families. Her response speaks to the anguish separation has caused her family, how this manifested in the loss of shared moments around food and their child's development. She expressed her clear desire to simply be able to spend time, quality time, as a family in a healthy way.

**Interviewer:** *What would you like to kind of what would you like to see change? To provide your family with? Basically, the access to be able to eat in healthy ways as a family?*

**Amy:** *I mean, I think..... [begins to cry]*

**Interviewer:** *Okay, I'm sorry. Take a break. Break. It's okay. It's okay. Yeah. And also, you don't have to answer anything. You don't want to or talk about anything you don't want to? Yeah.*

**Amy:** *No, I's just remembering, like me sending videos and pictures of like, his first food. And you know, breastfeeding has been a huge part of our life, right? Like, he's still nursing. And for some reason, well I mean not for some reason, we know why, but I refused to accept and keep kept sending pictures of our kid nursing because it's a huge part of our life. That's how he gets his nutrients.... And they repeatedly got rejected, time after time after time for sexually explicit content. And it's just like, I'm having to send pictures and videos of our kid eating. And like, he's just eating. Like, his dad doesn't get to see him take his first bites of food. And he doesn't get to see him in these sweet moments when he's nursing. Yeah. So I don't I guess I don't know how to answer your question not to say that like I wish we had. Yeah, I wish we had an option to eat together to share a healthy meal together.*

### **Additional Findings**

Two additional findings emerged that were beyond the scope of my study's focus but are so prevalent they necessitate mention. Both topics arose organically in the interviewing process

as a part of the fluid nature of qualitative work. First, in all six interviews prison food was addressed in exclusively negative terms with vivid description. This is one area of the study in which participants were homogenous. They all have direct experience with WA State DOC so the unanimity of the findings, as well as the consistent and high strength of their negative sentiments on the topic, is notable. While extensive research already documents the conditions of prison food it is evident that change is slow to come from these findings. The continued investigation into the quality of prison food conditions in the context of health outcomes and the creation of actionable policy around it is still needed.

Second, I did not question participants about their or their partner's reason for incarceration, but three of the women whom I interviewed, Claire, Maggie, and Lisa spoke openly about how drug use led them to be incarcerated. All three explicitly connected their priorities in health and food as related to their previous drug use. Claire and Maggie both connected this a step further explaining how their priorities in feeding their children healthy meals come out of a form of love and prioritization on physical health from their past experience of neglecting it for themselves or their older children.

## **Discussion**

### **Limitations**

This study has multiple limitations that constrain the strength of its findings and the applicability of the results. First, there were few parameters used in sample selection resulting in little consistency between participant demographics. This limits the ability to generalize the results for a particular group. For example, selection for more specific relevant factors such as length of incarceration period, age(s) of the child(ren), or the gender of the incarcerated parent would have generated data that was more amenable to statistical analysis even with such a small

sample. This could have produced more concrete findings in trends for a more specific demographic. Additionally, the small sample size, just six interviews, is a limiting factor in the study's strength. Twenty or more interviews are considered standard for producing publishable and significant results. The small sample size limits the ability to run any quantifiable research as well.

The study design did not allow me to collect health metrics on the participants and their family members such as weights, BMIs, or presence of nutrition-related chronic diseases. This information would unlikely have been helpful in this study because of the small sample size but would be advantageous in studying this issue in the future. Furthermore, I decided not to administer any food frequency questionnaires or other food log-related surveys to the participants. This may have generated more accuracy in the participant's recollection of common foods now, but when questioning them about common food patterns from other periods in their life this likely would not have provided more information than already attained about staple foods consumed. The addition of food questionnaires will be beneficial if longitudinal studies or comparative studies are completed in the future on this topic.

Causes for these limitations were mostly attributable to structural constraints of the study. My study was conducted as a part of undergraduate research with a two to three-quarter timeline that naturally restricted options for study design. Optimal study designs on the effect of parental incarceration on family foodways would be either longitudinal methods or comparison groups but both options were not feasible for the parameters of this project. Within the study design that I used, semi-structured interviews, a longer timeline would have allowed the collection of more interviews and a more inductive approach where I could have followed leads from participants where patterns arose outside the scope of my study.

The COVID-19 pandemic also drastically altered my research capabilities. Mainly, the pandemic negatively impacted my ability to recruit and interview participants. Normally, I would have been able to set up in-person meetings with individuals in the WA DOC families support community and become more involved with the organizations I reached out to through the process. Attendance at community events was mostly unavailable and when it was, the virtual formatting led to small attendance.

### **Future Directions**

Despite the limitations to the study it has several points of value and provides preliminary information on the topic of parental incarceration and family foodways, a subject that had not been explored until this study. It contributes to the efforts of both nutrition/public health and incarceration research by highlighting that incarceration does appear to influence how and why families and children eat what they do. The three findings of this study lead to ideas for future research and policy work in this subject.

Issues that parents addressed on the topic of financial losses incurred because of incarceration have implications for food insecurity and the role of government assistance food programing. While WIC and other government assistance programs were used by some participants, others relied on their families for support or mentioned that they were not immediately aware of the options for the programming. The incarceration system is not built to be an aide in social services and ultimately should be dismantled or greatly reduced due to the overwhelming evidence on the damage it causes, but to reduce harm immediately social services need to be integrated into the carceral system as it stands today.

When a parent is sentenced, the family or guardians of the child should automatically receive informational resources about their local food assistance program options. This needs to

include easy-to-follow instructions on how to receive the benefits if they are eligible (online sign-up or in-person offices) and the closest location of a distribution center. Education about the benefit of continuing or starting to eat together as a way to prevent harm from a parent's incarceration and promote health should also be available. Making sure that families know that eating together, regardless of what food is shared, can promote better food habits and emotional development is key. Many parents are not aware of this information about eating together and only know about government recommendations for food groups. Poverty and incarceration are so highly linked that targeting families with an incarcerated parent for food resources could have a huge impact on harm reduction especially if it is in conjunction with the best information on how to build healthy eating habits together. One downside that still exists within food assistance programs is that they limit the choices that individuals have when picking what foods to eat. As participants in this study noted, programs may assist financially but with the price of fresh foods being so high they are often still unaffordable. In other instances, dietary restrictions or personal preferences in food choice are not accounted for and the program compels the consumption of certain foods.

Visitation during the incarceration period is another subject touched on by participants that could be improved by policy changes and allocation of funds. With families sometimes visiting several times a month and for up to six hours at a time, restriction to vending machine only options for visits forces families into making unhealthy choices. Once again, prisons cannot and should not replace social services and public health programming, but the complete lack of any healthy options and the forced constraint of choice on families who visit goes directly against the government's recommendation for healthy eating options. Knowing that the families who are visiting are more likely to be predisposed to food insecurity, poverty, and other financial

restrictions, providing a hot meal or meals of unprocessed foods could make a big difference for when families visit. The creation of an atmosphere over food that is enjoyable and nourishing could provide a restorative and bonding experience in an otherwise challenging and traumatic time. While the fight is still ongoing to provide nutritionally sound options for prisoners, simultaneous work should be done on the quality of visitation meals.

The descriptions given by one participant on the rules around lactation during visitation also highlight the need for policy changes that better support breastfeeding parents if they visit their partners. The lack of proper lactation facilities with DOC for visiting members goes against best practice for the health of the parent and child and causes an additional burden to an already lactating parent. New policies around lactation and a room in which it can take place during visitation need to be put in place to secure the child's and mother's right to optimal nutrition.

Evidence from this study shows that families who have or are experiencing the incarceration of a parent desire better options for their family's and child's nutrition and care about eating together. Knowing all of the social, emotional, and physical health benefits of family meal sharing, incorporating eating together as part of pre-release or post-release reintegration programming for incarcerated parents and their families shows promise as a program to increase overall health. Keeping in mind that prisoners and their families face multiple burdens upon release asking them to eat together may seem unattainable or intrusive. If done in an educational way that demonstrates how families can eat together for *any* meal, with *any* food, and that it does not need to be every day, this could expand both the health benefits of a reentry program and be more sensitive and attuned to the population's needs.

The solutions recommended here are not meant as ultimate solutions to the underlying systemic issues that drive incarceration. Rather, these recommendations are based on what would

help families like the ones in this study get through the experience of parental incarceration with the least amount of harm to their health outcomes. These harm reduction strategies are essential but do not in any way replace higher upstream solutions targeting poverty and racism that are the originating causes of incarceration and health inequities.

Each participant's story and their experience provided anecdotal evidence and valuable insight into how parents and their children eat in the context of parental incarceration. One of the benefits of having such a non-homogenous sample was that it gave insight into a variety of demographics: families with multiple children, families with infants, and families with access to additional programming, and perspectives from both paternal and maternal imprisonment were all included. Further research on the topic of parental incarceration and nutritional health could focus on subgroups and utilize more refined studies. Possible topics include: What are the effects of family-centered programming that includes cooking and meal sharing requirements? What unique challenges do incarcerated parents of infants face?

Future research should utilize at least 20 interviews from the demographic studied and have a longitudinal format where eating habits can be tracked over time. Comparison studies can also be done where similarly situated families are compared with the primary difference being parental incarceration status. Food frequency questionnaires should be administered whether doing a longitudinal or comparison study. With more homogenous groups, statistical analysis could be run to find trends or to find discrepancies between the comparison group and group experiencing a family member incarceration.

Additionally, continued quantitative research should be done on the statistics of families with incarcerated parents. Capturing this population in national and state data sets on health and nutrition is essential for public health efforts. Tracking chronic diseases related to nutrition and

childhood eating patterns using a food frequency questionnaire in conjunction with qualitative interviews to establish eating environments and patterns would produce the most robust evidence of the issue.

The conclusions from this small study are clear: incarceration does harm families and disrupt their eating habits. From food insecurity to barriers in breastfeeding, incarceration is not only a co-occurring outcome with poor nutrition stemming from racism and poverty but compounds already fragile families' struggles with food as an independent contributing factor. A prison sentence for a parent harms the child. Letting families share meals, cook together, and develop optimal eating habits is essential to our populations' health. It is one more way that we see the carceral system damage health and wellbeing for not only prisoners but for their children.





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## Appendix

### Recruitment statement

“Looking for Study Participants to Interview on Parental Incarceration and Family Nutrition

My name is Ella Munizza; I am an undergraduate student at the University of Washington conducting a study on parental incarceration and family nutrition. I am looking to interview formerly incarcerated parents about what they and their families have eaten over time.

Participation would involve filling out a pre-interview survey with background information on yourself and your family, (such as how many children you have, their ages, your length of incarceration, etc.). Then being interviewed about what you and your family ate before, during, and after your experience in incarceration, what barriers you face to feeding yourself and your family today, and what you want to see change in the future.

The interviews will last no more than 1 hr and are paid with a \$15.00 Amazon gift card. Interviews are virtual at this time. All interviews will be confidential.

Please contact Ella Munizza through email at [ejm11@uw.edu](mailto:ejm11@uw.edu) or by phone at (253) 820-8166”

### Scheduling email

Dear \_\_,

Thank you so much for your interest in participating in the research I am conducting on parental incarceration and family nutrition. I am emailing to schedule a time to be interviewed and to send you the materials you will need beforehand.

Current times I would be able to meet (over Zoom) for the interview are:

Saturday, December 19 through Wednesday, December 23

Anytime between 8 am and 8 pm PST.

Let me know what day and time work for you and I will follow up with the Zoom link. If Zoom is not available to you the interview can also be conducted via phone, please reply with your phone number in that case.

Before the interview, I ask that you fill out the demographic/background survey attached below and send it back to me so I can better tailor the interview to your experience. Like the interview, you may opt-out of any questions. I will also need you to read and electronically sign and send back the consent form attached. This is a Word Doc and Word should have a "pen" option to sign with.

Some final information: This interview and your survey information will be completely confidential. The interview will take approximately 1 hour. It will be paid with a \$15.00 Amazon E-gift card; I will send you the code to it after the interview is complete.

Thank you for taking the time to be part of this study and to answer questions about your story.

Best,

Ella Munizza

### Pre-interview survey questions

- How old are you in years?
- What are your gender pronouns?



- What is your racial identity?
- What is your ethnicity?
- Do you receive any government assistance for food?
- If yes, what program(s)?
- How many children do you have? (This includes step-children and adopted children, any child you are a primary guardian over.)
- What is/ are the age(s) and gender(s) of your child/ children? (example: girl, 7)
- How many children did you have before you entered jail/ prison?
- What is your current relationship status?
- Is there a partner or person (ex-partner or spouse) that you co-parent with?
- What was your relationship status before entering jail/ prison?
- Have you been incarcerated more than once?
- If yes, answer for the most recent period of incarceration. What year did you enter jail/ prison?
- How long did the most recent sentence last in jail or prison?
- Who was/ were the primary caregiver(s) of your children during that time?

### **Interview protocol**

11/15/2020

Pre-interview with each participant: Go over and assess their survey information to help guide the interview.

Some things that may come up: Ages of children throughout the process what to probe on for each age group:

- 0- 1( Infants) Breastfeeding
- 1- 5 Taste exploration, variety, eating together, and modeling
- 5-8 or even older- Eating together, collective eating, TV during eating, eating out
- Overall importance will be the availability factor

***New questions that were added to the interview guide on 01/ 21/ 21 after the first two interviews had been completed to reflect what was addressed and what had been pointed out to me as relevant by WA state members of the incarcerated community: They are italicized***

#### Section 1: Pre-Incarceration Eating for You and Your Family

- In this section, I will be asking you some basic questions on what you and your family ate before you experienced incarceration.
- 1. Thinking back to your time before you entered prison/ jail, what foods did you and your children eat regularly?
  - a. Think about meals you ate regularly- “staple foods”
- 2. How often did you eat together as a family?
  - a. This includes at home or a restaurant
- 3. When at home, how often did you eat together?
  - a. This includes take-out or home-prepared foods.
  - b. Was there a difference if you ate the meal together if it was home-cooked or if it was takeout?

#### Section 2: During Incarceration Eating for You and Your Family

- This section will be the same as the first but apply to the time when you were incarcerated. I am aware that during this time you were separated from your children so you may not have responses to questions about their eating patterns; know this is okay.
- 1. While incarcerated, can you tell me about what you ate while in jail/ prison?
  - a. *Can you tell me how you would describe your relationship with food while in prison?*
- 2. *Were there family visits with your children while you were incarcerated?*
  - a. *If yes- what food options did you have as a family if any during those meetings?*
  - b. *What was the tone and feeling during those times of eating?*
- 3. To the best of your knowledge, what foods were common for your children to eat while you were separated?
- 4. To the best of your knowledge, do you know how often they ate with who they lived with at that time?
- 5. To the best of your knowledge, when they ate at home how often was that a meal together?
  - a. Was there a difference if you ate the meal together if it was home-cooked or if it was takeout?

### Section 3: Current Eating for You and Your Family

- I will now ask you questions about what you and your family eat today.
- 1. *Has the way your kids and self eat changed because of the incarceration period? Is it different than before?*
  - a. *How about your/ your family's relationship with food?*
- 2. What do you and your children typically eat today?
- 3. How often do you all eat together as a family?
  - a. This includes take-out and home-prepared meals.
- 4. When at home how often do you eat together?
  - a. This includes take-out or home-prepared foods.
  - b. Was there a difference if you eat the meal together if it is home-cooked or if it's takeout?
- 5. *Do any of your children seem to have an "unhealthy" or disordered relationship with food now?*
- 6. *For those who answer yes to being on food benefits: can you tell me how having food benefits impacts your and your child's eating?*
  - a. *Restricted options?*
  - b. *Stigma?*
  - c. *Other?*

### Section 4: Barriers

- This section is where I will ask you about any barriers you identify to feeding yourself and your family.
- 1. What barriers or challenges do you experience today with feeding yourself and your family in the way you would ideally?
  - a. Common barriers for people often include:
    - i. Proximity to grocery stores or other food retailers
    - ii. Finances
    - iii. Transportation
    - iv. Food preferences of children

- v. Time constraints
- vi. Affordability
- vii. Culturally appropriate food availability
- viii. Parent's personal food preferences

2. *Do you think that any of those barriers are related to the incarceration period?*

Section 5: What You Want to See

- Finally, I will be asking you about what you could see as helping reduce the barriers you identified.
- 1. Thinking about the challenges you identified, what do you think of that could be helpful solutions to those barriers?
  - a. Are these things you can do? Your community? Government?
- 2. *What are some things you would like to see a change in the WA state DOC to make maintaining a healthy relationship with food for you and your family possible?*

Final question:

- Is there anything you would like to mention or address that may not have come up in this interview that you feel is important to share or note?

### Codebook

Name	Description	Files	References
After Incarceration	Anything referred to in a case that occurs chronologically after incarceration ends.	4	45
Autonomy or Freedom of Choice in Food	Any expression regarding full control and lack of restrictions around dietary choices involving types of food, eating times, and context of eating.	4	9
Before Incarceration	Refers to anything in the case chronologically before the incarceration period began.	6	39
Breastfeeding	Any references to breastfeeding.	4	10
External Barriers	Any barriers that prevent breastfeeding or inhibit the ability to breastfeed connected to social, environmental, or other external conditions.	1	1
Physiological Barriers	Any instance where a physical condition of the mother or child was the inhibiting cause or barrier to breastfeeding. Includes genetic conditions, and substance use.	2	4
Change	Change over time. This node specifically includes changes that are explicitly mentioned by a	5	55

	participant between three of the chronological nodes. This involves large shifts in routines around food and eating for themselves, their partner, or their children before, during, and after incarceration.		
Child is Incarcerated	Includes mention of a participant's child experiencing incarceration themselves.	2	3
Child or Children	Captures any mention of information specific to the child or children in the case.	6	63
Eating Patterns or habits	Refers to any routines, habits, or patterns around the process of consuming food. This includes time, place, and social context and captures instances where a participant describes reoccurring patterns involving their or their child/children's diet and food choices in a given time.	6	72
Eating Together	References to sharing meals as a family and eating as a group.	6	34
Lack of pattern or structure	Any instance in a case where a participant mentions the lack of routine for their family or children's eating patterns including meal times, staple foods, or cooking patterns.	5	7

Meal Preparation	References to the process of obtaining food, cooking or preparing meals at home, and cleaning as a routine.	5	15
Delegation of tasks or food responsibilities	Any mention of the sharing of food-related duties between the parents or the parents and children.	2	7
T.V.	Presence of television as a routine part of eating times.	1	1
Food Assistance Programs	Any instance in a case where food assistance programs are used or referred to as part of the wanted change.	4	6
Ideal Eating Habits and Routines	Instances where a participant refers to how they would ideally like to feed themselves and their family including specific types of foods or routines.	4	6
Incarceration Period	Refers to anything in the case chronologically during the incarceration period.	6	71
Commissary Food	References to buying food from a store in prison.	3	4
Prison Food	References to the food served in prison to prisoners or available during visitation.	6	14

Visitation	Refers to any information participants provide about visitation during the incarceration period.	4	17
Influences on Food choices	This includes both unwanted barriers that restrict food choices such as finances, time, or transportation and other influences such as diet and health reasoning or taste preferences.	3	7
Financial	Money and fund-related constraints to food choices. Any time a participant mentions making choices around food and eating to accommodate finances.	5	21
other constraints	Other constraints or factors.	1	1
Allergies	Mention of allergies as an influence on food choice.	1	1
Diet or Health Reasons	Includes any time a participant mentions health or following a specific diet or eating certain foods as part of maintaining or attaining health. This includes choices for the family, for the children, and themselves.	4	23
Food and cooking Knowledge	When a participant notes their or their children's or partners cooking abilities or knowledge on food as a factor shaping food choices.	1	2

Prison or Jail Imposed Control	Mention of prison conditions as an influence on food choices and eating habits and behaviors. This includes both the prisoner during their sentence or restrictions during visitation.	5	21
Taste Preferences	When a participant talks about liking or not liking foods as part of their or their children's food choices.	3	4
Time or Scheduling	When a participant notes time as a factor influencing their families, children's, or their own food choices and patterns.	4	6
Lack of Social or Emotional Support	When a participant notes feeling a lack of resources emotional or material from social connections, family, or government bodies.	1	2
Parent or Parent	Information about the parent or parents of the case. This could be the parent being interviewed or their child's other parent.	6	68
Pregnancy	Any mention of pregnancy by a participant during the interview.	1	2
Self-Reliance	When any person mentioned in a case where they mention needing to do things on their own, fend for themselves, or complete activities and tasks with no support or guidance.	3	4



Sentiments	Refers to any overt emotional responses or attitudes participants expressed related to any topic during the interview.	1	1
Indifference	Explicit indifference expressed on a subject when asked about it, the participant may state they are neutral or have no strong opinion.	2	4
Negative	Refers to any time a participant expresses a negative attitude around a topic or event, this could be anger, sadness, frustration, regret, etc.	6	39
Positive	Referring to any emotions or attitudes of a positive nature such as happiness, relief, joy, or calm	5	21
Social or Emotional Support	When a participant mentions the presence of social, emotional, or material support provided by friends, family, or government agencies. Excluded food assistance; coded separately.	5	6
Specific Foods	This refers to any mention of specific foods or categories of foods that a participant refers to. Often coded in conjunction with "Eating patterns and routines" as part of their staple foods.	4	5

Desserts or Sweets	This refers to candy, baked goods, ice cream, or other dessert foods.	2	3
Fruit		4	8
Homemade	Refers to all instances where a participant discusses cooking meals at home and making food at home.	5	24
Mac n Cheese		5	7
Meat eggs or dairy or protein		5	18
Processed Foods	The category includes mention of chips, chicken nuggets and other frozen readymade meals, vending machine food, and any specific mention by participants of processed foods.	6	17
Restaurant or Take Out or Fast Food		5	11
Sandwiches		5	7
Starchy Items and Grains	Pasta, rice, noodles, oatmeal, bread, etc. Any starch or grain item not including desserts.	4	9

Supplements		1	1
Vegetables		4	10
Vending Machine Foods	Mention of foods specifically attained from vending machines.	2	4
Substance Use and Abuse	Any reference in a case about substance use, abuse, addiction, or recovery,	3	14
Unknown on Kids	When a participant does not know an answer on their children's patterns or habits around food. Often occurs in interviews where the parent interviewed was imprisoned for a period of time.	2	4
Wanted Changes	When a participant speaks to what they would like to see improve or change for themselves, their kids, their family, or in DOC process in general for families and with food.	6	9
Weight or Body References	When a participant discusses their or their children's weight or body in any context.	4	7
Whole Family	When a participant talks about any patterns, routines, or activities about food involving and applying to the whole family (both parents and children).	6	47

## Interview with Coding Stripes

The screenshot displays a qualitative data analysis software interface. On the left is a sidebar with a 'Quick Access' menu containing 'Files', 'Memos', and 'Nodes'. Below this is a 'Data' section with 'Files', 'File Classifications', and 'Externals'. Further down are 'Codes' (Nodes, Sentiment, Relationships, Relationship Types), 'Cases', 'Notes', 'Search', 'Maps', and 'Output'. The main window is titled 'Amy Transcript' and shows a transcript of an interview. The transcript is divided into sections for 'Amy:' and 'Me:'. The text of the interview is as follows:

**Amy:**  
Yeah, totally. I mean, first of all, like we ended up going on WIC, so I was gonna, like, WIC is certainly helpful, but, you know, it's like, Okay, well, really, as a species, we don't need to be eating that much dairy. Like, the level of dairy is insane on WIC. And I don't eat that much dairy, generally speaking, but it I couldn't afford to do other things, and I had this source of calories. So I needed to eat that source of calories. So I did and I still do. And so, I know for me, like I didn't I didn't know about the goat's milk option for a while. And so like just straight cow's milk was just tearing up my system so I was like, I was always kind of like, just felt kind of gross because I I don't think my system wanted to eat like have that much dairy. So that was a that was a huge thing. We didn't have like any dairy before he left and then we like had all the dairy

**Me:**  
Interesting. Yeah. And did you go on WIC is like a direct? Was that directly influenced by your husband's incarceration?

**Amy:**  
Yeah, I mean, I didn't know, I guess I didn't know about or wasn't able to research WIC until my kid was about six months old. But it got to a point where I was like, I literally have no idea how I'm gonna, like, afford to feed us or put gas in the car. So like, I have to figure something else out. And so I went on WIC and EBT. Yeah, around six months. Yeah.

**Me:**  
Okay. Um, I guess this is a good time to ask that question that I was going to ask what barriers or challenge challenges do you face with like feeding yourself and your kid and in the way that you would

On the right side of the transcript, there are vertical colored stripes representing codes. The codes are listed in a column on the far right: 'Over-urban/inner-city', 'Fruit', 'Starchy items and grains', 'Food Assistance Programs', 'Meat eggs or dairy or protein', 'Variables', 'Visitation', 'Homemade', 'Influences on Food choices', 'Before Incarceration', 'Change', 'Breastfeeding', 'Child or Children', 'Financial', 'Eating Together', 'Eating Patterns or habits', 'Whole Family', 'Prison or Jail Imposed Control', 'Negative', 'Parent or Parent', 'Incarceration Period', and 'Coding Density'. The stripes are color-coded: purple for 'Food Assistance Programs', green for 'Meat eggs or dairy or protein', yellow for 'Influences on Food choices', blue for 'Change', orange for 'Breastfeeding', light blue for 'Child or Children', pink for 'Financial', light green for 'Eating Together', light orange for 'Eating Patterns or habits', light blue for 'Whole Family', light orange for 'Prison or Jail Imposed Control', light blue for 'Negative', light orange for 'Parent or Parent', light blue for 'Incarceration Period', and light orange for 'Coding Density'. There are also some horizontal stripes at the bottom of the transcript, labeled 'Lack of' and 'Mac n'.

