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# Through Their Own Eyes: Exploring New Mexico High School Students' Perceptions of the Influences on Their Food Practices

Lynn Marie Walters

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**THROUGH THEIR OWN EYES:  
EXPLORING NEW MEXICO HIGH SCHOOL STUDENTS' PERCEPTIONS  
OF THE INFLUENCES ON THEIR FOOD PRACTICES**

by

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M.S., Health Education, University of New Mexico, 2003

DISSERTATION

Submitted in Partial Fulfillment of the  
Requirements for the Degree of

**Doctor of Philosophy  
Communication**

The University of New Mexico  
Albuquerque, New Mexico

**May, 2015**

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## **DEDICATION**

To all the children of creation—may you flourish in health and wisdom.

To the students who shared their stories—may your lives be filled with goodness.

To Shrikrishna Kashyap—may your effulgent light shine always.

## ACKNOWLEDGMENTS

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**ABSTRACT**

This project explores New Mexico high school students' perceptions of the influences on their food practices, with a particular focus on how family, culture, interpersonal communication, and cooking influence dietary habits. In light of changes in food practices that have led to unhealthy dietary habits, this research aims to contribute to the understanding of the interplay between food, culture, and communication in order to inform health communication and nutrition education interventions and public policy strategies to promote healthy eating behavior among young people.

The theoretical framework of this research is grounded in health communication theory—with the socio-ecological model as a central analytical model—and interpersonal communication theory—with a focus on personal influence theory—as complementary perspectives that allow for the exploration of the complex interrelationships that influence high school students' food practices. The investigation is informed by research on: the changing foodscape and its impact on health; adolescent health and eating behavior; levels of influence on food practices; and communication and eating behavior.



The investigation aims to fill a gap in the literature on the role and value of cooking in food practices among high school students. Little previous research has investigated interpersonal communication as a primary influence on food practices among high school students, and, although food preparation skills as a factor of influence on dietary habits has attracted the attention of researchers, there is much to be learned about these skills among adolescents.

My interpretative approach focused on the analysis of first-person visual and textual perspectives of New Mexico high school students. The participants in the study were 14 high school students, predominantly Latinos, who were representative of the cultural diversity and demographic trends in the state's public school system. The research design incorporated visual research methods of photo-elicitation and photovoice, focus groups and interviews, and collection of self-reflective writing by participants. Grounded theory procedures were applied to the data analysis process. The study addressed two questions: 1) What do New Mexico high school students identify as the main influences on their food practices? 2) Among the influences perceived by students, what is the value attributed to: a. family and cultural heritage, b. interpersonal communication, and c. the practice of cooking?

Findings reveal that the high school students perceived multiple influences on their food practices. These were categorized in the analysis as follows: cultural heritage of families, including cooking as an enactment of tradition; interpersonal influences; gendered roles; economic factors; commercial influence; and perceived health outcomes. Four primary themes emerged in students' visual and verbal narratives: the cultural heritage of family imbues value to food practices; there is a perceived friction between

cultural traditions and daily food practices; cooking is perceived as a means of honoring and ensuring continuity of cultural and family heritage; and cooking is an attribute of self-reliance which may increase food access and facilitate health.

Three patterns that emerged from the key findings of this study suggest theoretical insights for further research. This research found the role of family influence on high school students' food practices to be primary; second, young people are interested in practicing self-reliance through cooking; and third, cooking is an aspect of food access. This study adds to health communication research by rearticulating the value of interpersonal and socio-cultural influences on high school students' food practices and suggesting future directions for research and practice.

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## **CHAPTER 1: INTRODUCTION**

This research project is designed to contribute to the understanding of how New Mexico high school students perceive and communicate about the influences on their own food practices. High school students are at a critical life stage as they negotiate the transition from the primary influence of family to broader spheres of influence of peers and society. By viewing the food practices of high school students through their own eyes, using visual research methods, supported by focus groups and individual interviews, this project contributes to the understanding of the interplay between food and culture, and how communication is a vital facilitator of the promotion of healthy eating behavior among young people.

### **Problem Statement**

Unhealthy dietary behavior has been identified by the Centers for Disease Control (2011, 2013) as one of six types of health risk behaviors that contribute to the leading causes of death, disability, and social problems in the United States. Social norms around food have changed dramatically over the last twenty years, transforming eating practices from family-centered and shared nourishment to commodified consumption, and leading to increased diet-related morbidity and mortality. In particular, the ways in which this health risk behavior is affecting children and adolescents in the United States has become a subject of significant public debate, policy, and research in the past decade.

The woes of the obesity crisis among children are well documented, with 78% of high school students reportedly not eating the recommended 5 servings of fruits and vegetables a day, and 1 in 3 children and adolescents overweight or obese (Centers for Disease Control and Prevention, 2011). Overweight and obese children and youth are

more likely than normal-weight children and youth to become overweight adults, and thus more likely to suffer from obesity-related chronic diseases, including heart disease, certain cancers, and diabetes (Centers for Disease Control and Prevention, 2009). For example, Type II diabetes is no longer called adult-onset diabetes because of alarming rates appearing in youth, a phenomenon that rarely existed only a generation ago (Centers for Disease Control and Prevention, 2009). Health experts have predicted that this generation of children may likely be the first in our nation's history to have a shorter lifespan than their parents (Dietz, 1998).

The current and predicted rising economic impact of overweight and obesity on health and medical costs has led to a surge in quantitative research on factors that influence eating behavior, which have frequently focused on the development of food preferences among children and youth (Birch & Fisher, 1998; Poti & Popkin, 2011). A number of researchers have focused on understanding how social factors contribute to this health crisis by examining the causal relationship between food environment, diet, and rates of chronic diseases, including cardiovascular disease, diabetes, and cancer (Drewnowski & Specter, 2004). Other studies have investigated how commercial interests negatively affect access to nutritional information and choices available to individuals (Nestle, 2002) and how gender issues (Bowers, 2000), family working patterns, and food technology have all played significant roles in the reduction of family meals and food prepared and eaten at home (Dyson, 2001; Lin, Guthrie, & Frazao, 2001). These studies have identified a myriad of factors that influence individual food practices, including availability and access to food, prior experience, perceived preferences, food preparation skills, perceived health benefits, family and social support, and direct and

indirect messages. In a comprehensive review of the complex individual and environmental elements that influence adolescent eating behaviors, Story, Neumark-Sztainer, and French (2002) found four levels of influence, including individual or intrapersonal influences, the social (interpersonal and community) environment, the physical environment, and society. Framed from an ecological perspective, the study applied social cognitive theory as a framework to reveal the importance of reciprocal determinism and the complex interrelationships that influence adolescents' food choices. Among these, food preparation skills are a factor of influence on dietary habits that has attracted the attention of researchers.

In studies conducted in the United Kingdom, Lang and Caraher (2001) observed that, due to culinary transitions related to cooking practices, cooking has declined among all classes of people, negatively affecting healthful eating behaviors. They have argued that as the women's emancipation and feminist movements of the last century made substantial and successful efforts to liberate many women from the duties of cooking, the social value of cooking was undermined. As more women have gone to work, there is often no one staying at home to cook, or to teach the next generation this practical life skill. Lang & Caraher (2001) also found that most adults had primarily learned to cook from their mothers, with the second most common influence being cooking classes in school. They argued for a reintroduction of regular "cookery" classes in schools. Lang and Caraher (1999) have also recommended that teaching cooking not be "ghettoized" by only focusing on low-income children and youth, but that in order to positively change norms around cooking skills and practices, cooking should be brought back as part of the educational experience for all children and young people. However, little scholarly

attention has been devoted to communication and cultural influences on the food practices of children and young people, as research on the influence of cooking practices on eating habits has almost exclusively focused on adults. This research helps to fill that gap.

As Lang and Caraher (2001) have asserted, “food is central both for existence and identity” (p. 2). This research project aims to elucidate how adolescents perceive and communicate about the interrelated influences of interpersonal, social, and cultural factors on their food practices and eating behaviors. My own exploratory, qualitative investigation into influences on high school students’ food choices found that cultural factors such as family traditions and early food memories emerged as strong influences on attitudes towards specific foods and self-reported eating behavior (Walters, 2011). Three themes emerged in that research: family and culture influence food preferences and cooking practices; the concept of “healthy food” is contested; and cooking is a practice of self-efficacy and empowerment. Sparked by the outcomes of this earlier focus group study, this research is designed to contribute to a deeper understanding of communication factors that are conducive to healthy eating behavior.

### **Purpose and Significance of Research**

The purpose of the project is to investigate high school students’ perceptions of influences on their food practices, with a particular focus on the roles of interpersonal communication and cooking. As stated earlier, significant changes in the food system have negatively affected dietary habits. One result has been the startling increase in the incidence of overweight and obesity, associated with an increase in chronic disease and predicted early mortality. Although changes on all levels of the foods system have taken

place, the decline in food preparation skills and practice is arguably a particular factor of influence on dietary habits that calls for further investigation.

There are three main aims of the project:

1. investigate high school students' perceptions of influences, specifically culture and communication, on food practices;
2. understand food practices that may facilitate decreases in morbidity and mortality; and
3. inform health communication/nutrition education interventions and public policy strategies to promote healthy eating behavior.

This research has a potential social value as it contributes to the understanding of cultural factors and food practices, including cooking, that may facilitate decreases in morbidity and mortality due to chronic diseases that result from poor food choices and dietary habits. I would argue that as society has devalued cooking and chosen to offload that “chore” to food processors and restaurants, we have, perhaps unwittingly, transformed the value of food from family-centered and shared nourishment to commodified consumption. In the rush and determination to climb out of the muck and mud of “primitive” living, has society overlooked the unintended consequences of eroded physical health and loss of long-standing cultural traditions and skills?

Identifying and increasing the understanding of factors that influence healthy eating behaviors, particularly among high school students, whose perspectives have been largely ignored in past research, has the potential benefit of engaging social and political support for food and nutrition education programs that emphasize skills and empowerment, including cooking as a facilitator to the practice of healthy eating

behavior. Furthermore, this research is intended to inform the design and implementation of effective health communication and nutrition education interventions, as well as to identify promising areas of public policymaking.

### **Overview of Chapters**

In Chapter 2, I present a review of relevant literature that incorporates research on the changing food environment and its impact on health (including food access and food insecurity, and cooking practices), adolescent health and eating behavior, and identified influences on food practices (including cultural and social norms, and the influence of family, peers, and gender), and communication and eating behavior. The chapter concludes with identifying a gap in the literature in regards to analysis of interrelated levels of influence on high school students' food practices, particularly the role and value of cooking.

Chapter 3 offers a description of the methods of data collection, research design, and analysis employed in this study. Data collection methods include folklife studies, visual research methods (self-reflexive photography, including photo-elicitation and photovoice), and focus groups and interviews. The explication of the research design describes the site and participants, procedures, and data collected. The chapter closes with a description of the grounded theory approach applied to the coding and analysis of data.

Chapter 4 details the findings of the research. It focuses on students' perceived influences on their food practices and presents the six main categories emerging from the data: 1) family and cultural heritage, 2) interpersonal influences of family and peers; 3) gendered roles; 4) economic factors; 5) commercial influence; and 6) perceived health

outcomes. Family and culture emerged as primary influences. An adapted SEM model illustrating the influences on high school students' food practices closes the chapter.

Chapter 5 presents findings related to the value that students place on family and cultural influences, interpersonal communication, and cooking. Four themes emerge: cultural heritage of family imbues value to food practices; students are aware of a friction between cultural traditions and daily food practices; cooking honors family and ensures continuity of cultural and family heritage; and cooking is an attribute of self-reliance that may increase food access and facilitate health.

Chapter 6 draws the main conclusions, including: 1) the role of family influence on high school students' food practices appears to be primary; 2) young people are interested in practicing self-reliance through cooking; and 3) high school students are aware that cooking is an aspect of food access. Drawing on the data, an integrated socio-sensory ecological model is proposed.

Future directions for relevant research and practice are suggested, including how food access and cooking practices are situated in the discourse of eating behavior and health. Such research might take perspectives of 1) interpersonal communication: investigate the role of interpersonal communication as a facilitator of cooking practices as a means of practicing healthy behavior; 2) intercultural approach: investigate the role of cooking as a means of crossing cultural divides that isolate and disempower individuals and communities, an approach that would focus on honoring the traditional food practices, with the aim of increasing understanding between peoples; and 3) educational practice: investigate how to teach and disseminate cooking skills that may promote healthy eating behavior.



## **CHAPTER 2: LITERATURE REVIEW**

### **Theoretical Framework**

This section contains a discussion of the particular theories informing this research. This research is grounded in the field of health communication and informed by the theoretical perspective of the socio-ecological model (SEM), which illustrates the multilevel influences on individual health behaviors (Bronfenbrenner, 1979). Within the framework of the SEM, the project also applies personal influence theory as a primary perspective from which to gain an understanding of the influences on high school students' food practices and how students communicate about these influences.

### **Health Communication**

The theory, research, and practice of health communication, which focuses on the relationship between communication and health, provides a promising arena for discourse around food in society. Health issues are inextricably interwoven with cultural discourse, empowerment, disease prevention, health promotion, social support, and interpersonal communication.

Distinct from general, explanatory communication theory, health communication theories help scholars describe and understand the varied modes and levels of communication practice and their effects on human health, including health attitudes, beliefs, and behaviors (Cline, 1995). Health communication research was first recognized as a sub-field within the discipline of communication in 1975 (Freimuth, 2004, p. 2053) and has since been viewed as a tool to eliminate health disparities worldwide. Initially concerned with functions of communication in diagnosis, cooperation, counseling, and education in health care, health communication has moved to encompass a much broader

range. The Centers for Disease Control and Prevention (2013) have defined health communication as "the study and use of communication strategies to inform and influence individual decisions that enhance health" (Health communication, para 1).

Babrow and Mattson (2003) have described health communication theorizing as "a consciously elaborated, justified, and uncertain understanding" (p. 36). These researchers assert that health communication emphasizes the study of how connections and tensions between people's uniqueness and commonalities contribute to the health status of individuals and, consequently, of society as a whole, including how societal values and economic and cultural factors frame and influence individual choice. Attention to aspects of communication that affect the body are more evident in health communication than in other communication disciplines. Babrow and Mattson (2003) have characterized health communication theories by the "pronounced and profound interplay of the body and communication" (p. 42), between science and humanism, idiosyncrasy and commonality, and uncertainties, values, expectations, and desires. Whether addressed through "processes by which physical sensations and diseases are conceptualized and labeled" (Babrow & Mattson, 2003, p. 40) or viewed from a cultural perspective, health communication relies heavily on embodied experience, and is thus, by its very nature, pragmatic.

Health communication theories encompass the making and sharing of meanings and practices about health and illness, as well as the critical role that uncertainty and its reduction play in communication about health and illness (Babrow & Mattson, 2003). Health communication research frequently utilizes interdisciplinary and integrated approaches, such as the biopsychosocial approach that relates the psychological, social,

and cultural belief systems that influence health and healing. Health communication theories are used also to positively influence health-related practices, including noncommunicable disease amelioration, reduction in tobacco and alcohol use, HIV prevention and education, increased breastfeeding, and improved nutrition and physical activity (Airhihenbuwa & Obregon, 2000; Ratzan, 2011).

### **My Research Perspective**

My ontological position is aligned with the sociopsychological and sociocultural traditions that view the individual as both agentic and subject to cultural and environmental influences within the phenomenal world. My epistemological viewpoint is that theory and method are by their nature reciprocal, as theory informs method, method tests and may expand theory. My praxeological position is consistent with Craig's (1999) sociopsychological perspective, which emphasizes communication as a means of expression, interaction, and influence; but I also believe that communication occurs within sociocultural and ideological contexts that position and ground the individual within social structures (Craig, 1999; Craig & Muller, 2007).

My axiological position is consonant with that of communication theorists who hold that health communication theories rearticulate values that support the health and well-being of human beings. Furthermore, my position is aligned with that of theorists who hold that "social justice, progressive social change, and ethics must be embodied" in the practice of research to make a difference in the world (Collier, Hegde, Lee, Nakayama, & Yep, 2001, p. 231).

Within the diverse landscape of health communication theories, the socio-ecological model and several interrelated theories serve as a frame for this study of

adolescent food practices. The next section summarizes the key assumptions and propositions of these theories.

**Socio-ecological model: “I am I, plus my circumstances.”**<sup>1</sup> The socio-ecological model (SEM) provides the overarching, macro-level perspective on the multiple factors that influence health behaviors. For the purposes of this research, I give particular attention to its application in nutrition studies by Contento (2011). This model describes levels of influence and their reciprocal relations, represented visually as concentric circles that expand outward from the individual to the interpersonal, organizational, community, and public policy (societal) levels. SEM identifies spheres of influence inherent in health communication and health promotion and prevention work. Levels of influence may be multiple, with multi-step influence both outward and inward between permeable levels, and through same-level networks. SEM is an extension of Hawley’s (1950) work in human ecology. Bronfenbrenner (1979) developed the model, which is often referred to as a theory and is widely applied in health communication and nutrition education research as a useful means to integrate multiple levels of influence into a coherent framework (Contento, 2011).

Critics of the SEM have observed that the model overlooks the possibility of discontinuity between levels, as when individual and family values do not match or when public policy does not support healthful choices (Richard, Gauvin, & Raine, 2011), or when behavioral intentions are substituted for behavior change (Armitage & Conner, 2000). In addition, they have argued that although influence across spheres is theoretically possible, the locus of control between levels is generally unequal. It also

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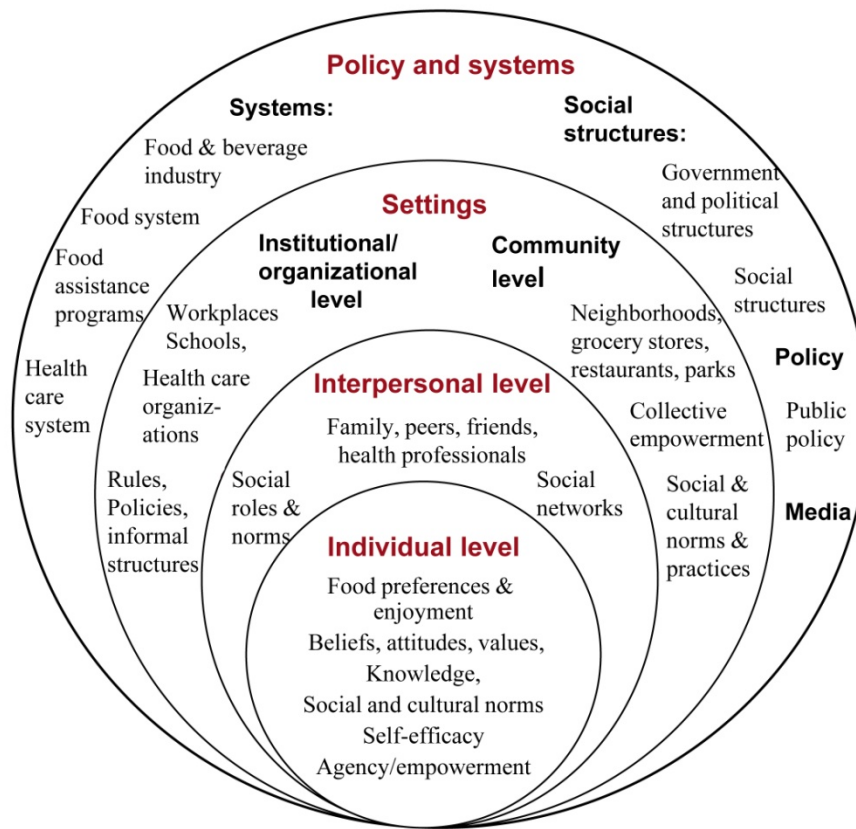
<sup>1</sup> S. G. Kashyap, personal communication, 2000.

must be noted that health communication interventions that aim to address all levels of influence identified in the SEM are extremely challenging due to the model's complexity (Dearing, 2003). Although health communication interventions that attempt to focus on all levels of SEM are generally not feasible, understanding the levels of influence on behavior can reveal leverage points on which to focus empirical work (Corcoran, 2007). Therefore, the model is a useful heuristic device that allows for the exploration of critical levels of influence on behavior.

SEM has been widely used to develop interventions to address the increase in overweight and obesity (World Health Organization, 2009). If one understands eating as “a complex set of behaviors influenced by an array of factors” (Sallis & Owen, 1997, p. 413), the model acquires obvious relevance. Thus, SEM is a useful theoretical perspective from which to investigate and examine high school students' perceptions of the different levels of influences on their food practices, including interpersonal, social, and cultural influences.

Figure 1, below, presents an application of the SEM that identifies levels of influence for the purpose of designing nutrition education interventions (adapted from Contento, 2011, p. 53).

**Figure 1. Social-ecological model identifying levels of influence for nutrition education interventions.**



Of particular relevance for this research are the roles, norms, and relationships within the interpersonal level. However, it is critical to understand that all of the levels influence the individual. For example, personal preferences may be determined early in life, but later influenced individually as tastes change, as well as through interpersonal relationships and food access, which may be as a result of policy and systems influence. The relevance and strength of different levels of influence may vary due to circumstances and lifestage.

In the examination of the interpersonal level, personal influence theory, applied to communication for the purposes of health promotion and prevention, also informs this study of food practices among adolescents.

**Personal influence theory.** This theory explores the influence of both personal and mass media communication in the processes of diffusion of ideas, formation of public opinion, and individual decision making. In the early 1950s, Katz and Lazarsfeld (2006) hypothesized that although messages could be effectively transmitted from media directly to the masses, personal influence among individuals was a key factor in motivating people to make decisions and take action in their own lives. Personal influence theory maintained that indirect effects via personal interactions were at least as important as direct effects of mass communication messages.

The burgeoning interest in persuasion in the 1950s considered influence as manipulation, contagion, and imitation. The research of Lazarsfeld, Berelson, and Gaudet (1968), in contrast, approached influence in terms of how relative positions in society, especially molecular leaders within social networks, influenced others in their communities. For example, Lazarsfeld's study of voting behavior reported in the book *The People's Choice* investigated the role of formal print media, as other mass media in 1940 were relatively limited in scope, in presidential voting behavior in 1940 in Erie County, Ohio—a small, relatively homogenous, Midwestern community (Lazarsfeld, Berelson, & Gaudet, 1968). Through this research, Lazarsfeld identified a two-step flow of communication (Katz, 1957), where opinion leaders, respected and listened-to members of a community, first read or listened to media, then shared that information with others, often less active consumers of media. This study was one example of integrating social theory with empirical studies to understand processes of decision making, including the dynamic “formation, change, and development of public opinion” (Lazarsfeld, Berelson, & Gaudet, 1968, p. xxii). Katz observed that opinion leaders had

long been identified in the process of agricultural innovations and later as key figures in medical innovations (Lazarsfeld, Barrelson, & Gaudet, 1968).

In the early 1950s, Katz and Lazarsfeld (2006) tested personal influence theory. Interested in mass communications effects, they found that opinion leaders, who could be any respected members of the community, family members, or neighbors, filled a key role in setting the tone within family and community groups through their social networks. They tested the theory by studying individual decision-making processes among women within social networks in their communities in the mid-west United States (Katz & Lazarsfeld, 2006). In the Decatur study, they looked beyond the previous assumption of personal influence as a vertical chain of influence, whereby higher status persons influenced lower status people to both vertical and horizontal positioning within social networks. The research investigated whether the decisions that women made in various areas could be attributed to personal influence or mass media. Topics examined within the Decatur study were 1) politics and public affairs, 2) market products, 3) fashion, and 4) movie-going. The study focused on the sources of choice, opinions, and behavior change by groups, individuals, and by incidents. The impact analysis found four ways that the women were moved to change: 1) through force, 2) immediate attraction, 3) indirect or represented attraction (i.e. marketing discussion), and control (from a valued source) (Katz & Lazarsfeld, 2006).

The Decatur study found that the power of everyday contact was the most important factor of influence, with horizontal influences generally the strongest. Interest in and of itself was not a critical factor, but shared interest, the confluence of interest in a topic when others are also interested in the same area, was meaningful. Few leaders were



found in all of the areas of interest, but as opinion leaders in each area showed divergent attributes, this was not surprising. In the final analysis, face-to-face contacts were found to be most important factors that influence changes in opinions (Katz & Lazarsfeld, 2006).

In later research, homogeneity, or homophile, was found to be an important factor in voting behavior, with “people who work or live or play together . . . likely to vote for the same candidates” (Lazarsfeld, Barrelson, & Gaudet, 1968, p. 137). The evidence included direct observation of participation in clubs or fraternal organizations, as well as an indirect or inferential approach that revealed that people with similar characteristics (age, education, and economic status) were more likely to vote similarly. The social stability and conformity of social groups were both reinforced by similar opinions. As Lazarsfeld, Barrelson, and Gaudet (1968) observed, “people vote not only ‘with’ their social group, but also ‘for it’” (p. 148).

More recently, Levac and O’Sullivan (2010) have observed that social media provide opportunities for social modeling and social influence, empowering people within social networks to share information, including health promoting messages. Health messages communicated by peers are often more positively received, and shared, than messages from health experts. Furthermore, on-line social networks provide opportunities for social modeling and social influence, especially among the young and middle-aged. Norman (2012) suggested that effective use of social media for health promotion across multiple platforms requires understanding and application of systems thinking. Social media have provided an instant platform through which even those most in need can

participate and provide social support and share innovative health promotion tips (Rothpletz-Puglia, Jones, Storm, Parrott, & O'Brien, 2013).

Although personal influence theory was not developed as a health communication theory, as this theory addresses how individuals communicate and influence behavior within social groups, through media use and interpersonal relations—two influences that are important in the life of adolescents—it is both relevant and applicable to this study of influences on food practices.

**Toward an integrated socio-sensory approach.** This theoretical framework has outlined complementary approaches to health communication relevant to this qualitative research that investigates New Mexico high school students' perceptions of influences on their food practices. Although the research methodology applied in this research follows an exploratory, inductive approach, this theoretical framework is of particular value for the analysis and interpretation of data collected.

In order to relate theoretical constructs that apply to food practices, and recognizing that the flows of influence are not necessarily neat and tidy, an integrated socio-sensory approach is utilized to address the interplay of the body and communication in pursuit of overall health. In this sense, SEM provides a framework for the multiple levels of influence that affect the individual, especially interpersonal communication in varied social contexts. At the interpersonal communication level, personal influence theory is used to assess and understand the effects of social modeling and social influence.

However, the sensory-related aspects of preparing and eating food should not be overlooked. The “sensory—affective,” experience of appearance, smell, and taste of

foods, interwoven with emotional connections and physical need, has been shown to determine likes and dislikes of different foods. The world of the senses informs our intelligence; and our attitudes and beliefs about food are no exception. An integrated approach may have the potential to engage individuals and families to take the necessary steps towards positive changes in personal health habits, including the areas of food and nutrition, physical activity, substance use, and emotional eating behavior.

### **Literature Review**

How, why, and what people eat is a result of complex factors, with cultural values, historical traditions, food preferences, and food access all playing important roles in food practices. Contento (2011) has described the current “complex food choice environment” (p. 6) with abundant, fast, cheap, and easy-to-obtain-and-to-eat food products, as a stark contrast to the rich culinary traditions of the past. The childhood obesity epidemic, often blamed on the “fast food” culture embraced by a large segment of the population of the United States, has been the result of myriad macro-social factors that influence individual food practices. These factors have included: seemingly innocuous technological advances in farming techniques that trade short-term increases in crop yields for long-term soil depletion, water pollution, and both known and unknown health consequences; corporate food manufacturing practices that utilize low-cost raw foods to create highly processed, low-nutrient products (Nestle, 2002); immigration and economic policies that prey on the desperation of the disenfranchised; social services practices that encourage reliance on foods with high levels of carbohydrates and fat (Drewnowski & Specter, 2004); and the more obvious “calories in/calories out”

declaration in the 2010 Dietary Guidelines for Americans (U. S. Department of Agriculture Center for Nutrition Policy and Promotion, 2011).

The purpose of this literature review is to provide historical topical context relevant to the proposed study. This review also encompasses prior research that documents the changing foodscape, including food access and insecurity, and reviews studies on cooking as a factor linked to empowerment and health. The review continues with research on adolescent health and eating behavior, then describes empirical research on the influences of cultural and social norms, family, peer, and gender and food practices. The review then addresses communication and eating behavior, and concludes with a discussion of gaps in the literature.

### **The Changing Foodscape and its Impact on Health**

Before 1900, most people cooked their own food and generally ate food that grew near where they lived, with a maximum variety of about 200 different foods (Vileisis, 2008). During the late twentieth century, typical supermarkets in the United States stocked about 12,000 items, chosen from a supply of 60,000 foods and food products (Molitor, 1980). In the twenty-first century, a plethora of food choice is available from vending machines, fast food restaurants, and an ever-expanding number of super-sized food centers. Simon (2006) reported that 51% of American's calories are obtained from processed foods, with only 7% coming from fruits, vegetables, legumes, nuts, seeds, and whole grains.

Bowers (2000) and others have suggested that the changing roles of women in the past 60 years, with more women entering the workforce as working mothers, has been a primary reason for the decline in home-cooked meals. Certainly, the women's liberation

movement of the 1960s (second-wave feminism) has had an effect on women's interest in domestic chores, but others have suggested that technological advances in preserving and processing food, especially cheap carbohydrate-based foods, have been the primary force behind the decline in cooking at home (Nestle, 2002).

Restaurants have taken over a major portion of the role of food preparation previously accomplished at home (Dyson, 2001). In addition, there is now a consumer system based on foods that are "fast, cheap, and easy" (Nestle, 2002). In 2001, Americans spent more than \$110 billion on fast food, a dramatic increase from the approximately \$6 billion spent in 1970 (Schlosser, 2001). Consumption of fast food has continued to rise; in 2011 Americans spent \$168 billion on fast food, the same amount as the estimated annual cost of the nation's obesity epidemic (Schlosser, 2012). From 1977-2006, the percentage of daily energy intake eaten away from home for children aged 2-18, increased from 23.4% to 33.9%, with the percentage of calories from fast food surpassing intake from schools to become the largest source of foods prepared away from home for all age groups (Poti & Popkin, 2011).

One of the consequences of this shift in social norms related to food preparation and consumption patterns has been that the prevalence of overweight and obese individuals in the United States continues to rise, especially among minorities and low-income populations (Ogden, Flegal, Carroll, & Johnson, 2002; Friedman, 2011). One third of children and adolescents in the United States are overweight or obese (Ogden, Flegal, Carroll, & Johnson, 2002; Ogden, Carroll, Curtin, Lamb, & Flegal, 2010).

Although the trend towards overweight and obesity is leveling off among some segments of the population, the early twenty-first century in the United States has been

aptly called “The Age of Girth” (Satcher, 2002). It has been found that children who are overweight or obese are more likely to become overweight or obese adults (Dietz, 1998; Serdula, Ivery, Coates, Freedman, Williamson, & Byers, 1993). In addition, research has shown that excess body fat contributes to chronic disease morbidity, especially of diabetes, heart disease, and cancer (American Institute for Cancer Research, 2009; Sibbald, 2002). As a consequence, this is the first generation projected to likely have shorter lifespans than their parents.

The prevalence of overweight and obesity in the United States and across the world has raised a call to action, especially from experts in the fields of health communication, public health, nutrition education, and economics. From pundit Michael Pollan (2009) to chef Jamie Oliver (2010), who exhorted in his TEDx prize speech to “teach every child to cook,” the public has been bombarded with messages about what to eat, when, and how. Growing economic inequities have called attention to food access issues. Low-income families are often limited in acquiring their sustenance from neighborhood convenience stores that sell cheap, high calorie, low nutrient foods that dot “food deserts” in inner-city and rural areas, while upper-income families have the means to purchase a variety of fresh, healthful foods from grocery stores and farmers markets in their neighborhoods (Drewnowski & Specter, 2004; Gittelsohn & Sharma, 2009; Glanz, 2009). In addition, substantial waste of fresh fruits and vegetables has been found to be a growing problem, although systemic efforts are being investigated to prevent, redistribute, and repurpose these foods (Pansing, Fisk, Muldoon, Wasserman, Kiraly, & Benjamin, 2013).

At the outset of public recognition of the obesity crisis in the United States in the early 2000s, it was assumed that the individual (with the possible influence of the family, especially on children), was solely responsible for his or her nutritional status and weight (Nestle, 2002; Ogden, Carroll, Curtin, Lamb, & Flegal, 2010). However, as this health crisis has burgeoned, multiple socioecological levels of influence on eating behavior and weight have become apparent (Story, Neumark-Sztainer, and French, 2002). Specifically, it has been found that food access, economics, food preferences, and cultural practices all play their parts in food practices (Engler-Stringer, 2010).

As the obesity crisis has deepened, interest and support have increased for culinary and garden education to encourage both physical activity and healthy eating. Bandura (2004) recommended that health promotion “be structured as part of a societal commitment that makes the health of its youth a matter of high priority” (p. 158). However, food and nutrition education is often considered “extra” in schools, rather than as a component of a required and vibrant comprehensive health education that prepares students to live healthy and productive lives. In the effort to understand the multiple factors of influence on eating habits, a major question is how to best engage and support families, schools, and communities in fostering healthy food practices.

The Centers for Disease Control and Prevention (2012a) observed that high school students’ infrequent fruit and vegetable consumption suggests the need for effective health promotion strategies. Recommendations include interventions at multiple socioecological levels, including that:

schools partner with communities in the development of healthy eating, schools can encourage students’ involvement in farm collaborations, community gardens,

and improving the availability of fruits and vegetables at neighborhood stores. School and community-based experiences with fruits and vegetables might help improve the food environment, influence students to consume more of these foods, and create a lasting impact as adolescents become adults. (p. 137)

Public health and nutrition education efforts to improve eating habits among children and youth have intensified, though results are mixed (Hornik & Kelly, 2007; Centers for Disease Control and Prevention, 2009). According to 2011 National Youth Risk Behavior Survey results, a significant decrease of soda consumption was reported by high school students between 2007-2011, fruit or fruit juice consumption significantly increased between 2005–2011, though vegetable consumption did not increase (Centers for Disease Control and Prevention, 2012b).

**Food access and food insecurity.** Food access and food insecurity have become serious issues in an increasingly inequitable and economically polarized American society. This may severely impact the nutritional status of youth, as they are most often dependent on adults for food. Nord, Andrews, and Carlson (2006) found that adolescents are even more vulnerable than young children in food insecure households, since parents in such households often feed young children before all other family members. A study that surveyed a large and ethnically diverse population of 4,746 middle and high school students found that adolescents who were food-insecure had a number of food-related risk factors for overweight (Widome, Neumark-Sztainer, Hannan, Haines, & Story, 2009). Food-insecure youths often ate more fast-food meals, with less available food at home (both healthy and unhealthy foods), and perceived greater barriers to eating healthfully than food-secure youths in the study. A surprising finding was that food-



insecure youths reported eating significantly more vegetables than their food-secure peers. Both food-secure and food-insecure youths appeared to perceive benefits from eating healthfully. This study reinforced earlier findings (Delva, Johnston, & O'Malley, 2007) that food-insecure youths were more likely than their food-secure peers to be obese (with a body mass index above the 95<sup>th</sup> percentile), with those from both low-income families and who are of racial/ethnic minorities at greater risk for overweight (Adams, Grummer-Strawn, & Chavez, 2003; Widome, Neumark-Sztainer, Hannan, Haines, & Story, 2009). However, Ward, Jilcott, & Bethel (2011) found that food insecurity among Latina women in North Carolina was negatively associated with overweight and obesity, also reporting that, despite a hypothesis that dietary quality would be lower among more food insecure women, there were no statistically significant relationships between food insecurity and dietary quality. These studies illustrate the complexity of factors that influence food practices, especially eating behavior.

The increase in awareness of the prevalence and consequences of food insecurity has given rise to food justice studies, an emerging field of research that addresses equity issues related to food access and health, including health communication practices, especially underscoring the impact of special interests and class systems in society. Lang and Heasman (2004) have characterized food justice concerns as “the maldistribution of food, poor access to a good diet, inequities in the labour process and unfair returns for key suppliers along the food chain” (p. 8). In 2009, Villianatos defined food justice as “the notion that everyone deserves healthy food and that the benefits and risks associated with food should be shared fairly” (Vallianatos, 2009, p. 186). Gottlieb and Joshi (2010) synthesized these definitions, describing food justice as the fair and equitable distribution

of benefits and risks in how and where food is grown, produced, transported, distributed, accessed, cooked (or not), and eaten.

**Cooking practices.** Home cooking practices have been found challenging to deconstruct in a food system that increasingly relies on highly processed foods. Engler-Stringer (2010) conducted a literature review on food, cooking skills, and health, and found that there were few projects that examined the relationship of dietary quality to cooking skills among different population groups. Nelson, Corbin, & Nickols-Richardson (2013) concurred, noting that “family cooking has become a means to an end,” rather than part of a nurturing social and cultural process (p. 1031). They also observed that although there appears to be a call for culinary skills education, there is a lack of published data on the outcomes and impact of culinary skills interventions. One systematic review of the impact of cooking classes on food-related preferences, attitudes, and behavior of school-aged children by Hersch, Perdue, Ambroz, and Boucher (2014) found “that cooking programs may positively influence children’s food-related preferences, attitudes, and behaviors” (p. 1). However, further research is needed to determine ideal program design.

Nonetheless, in research studies cooking has been described by “self-identifying ‘healthy eaters’” as a practice that provides perceived control and self-efficacy, two constructs identified in social cognitive and empowerment theories as factors that may encourage high school students to explore a variety of healthy foods (Stevenson, Doherty, Barnett, Muldoon, & Trew, 2007, p. 430). Along these lines, Dewar, Lubans, Plotnikoff, and Morgan (2012) developed and tested a scale of social cognitive measures related to adolescent dietary behaviors that included self-efficacy, intentions, perceived

environment, behavioral strategies, social support, outcome expectations, and expectancies. Lang and Caraher (2001) have argued that “Cooking can be either enslavement or freedom,” a reference to the paradox observed when people (mostly women) spent almost all of their waking hours engaged in activities to put food on their families’ tables (p. 4). But taking a cue from empowerment research, Lang and Caraher suggested that freedom comes with having the power and skills to take care of oneself under any circumstances. Cooking may indeed be considered a prime example of empowerment education as described by Wallerstein (1993), and of salutogenic health promotion practice (Koelen & Lindström, 2005).

There has been a dearth of research on how cooking influences high school students’ eating behavior, though with obesity-related morbidity and mortality growing, some studies have been conducted. Adolescents who participated in food preparation lessons were found to have better dietary quality as young adults than comparable peers who had not participated in such lessons (Laska, Larson, Neumark-Sztainer, & Story, 2011). A Canadian study with eight 15-year-old, at-risk youth, found that cooking education had a positive impact on increased intake of fruits and vegetables among at-risk youth (Thomas, & Irwin, 2011). However, Larson, Perry, Story, & Neumark-Sztainer (2006) found that among young adults, ages 18-23 years, food preparation was not practiced weekly by the majority. The most common reported barrier to cooking was lack of time. Still, young adults who reported frequent cooking were less likely to eat fast food and more likely to meet dietary guidelines for consumption of vegetables, fat, and whole grains.

Other studies found that cooking and cooking skills have only occasionally been mentioned as a factor of influence in food choice, with access—or what was readily available at home, in school, or in the neighborhood—and food preferences more frequently discussed (Stevenson et al., 2007). Edquist, Koch, and Contento (2009) investigated adolescent food stories to learn more about the role that culture plays among youth. They conducted semi-structured focus groups with 16 African-American and Latino high school students to reflect on personal food stories, and also provided students with disposable cameras for documentation purposes. Their analysis revealed that most of the students relied on and were satisfied with convenience foods, especially when eating with friends. In contrast, two of the girls in the group were proud of their healthful eating and shared that value with the rest of the group.

One study, conducted by Gaines, Robb, Knol, and Sickler (2014), examined the role of financial factors, resources, and food skills in predicting food security among college students using survey methods ( $n=557$ ), noting that Alaimo's 2005 conceptual model of food insecurity showed that "poor food/cooking skills increase risk for food insecurity" (p. 375). Findings from this research included that students who self-assessed as high food secure reported significantly greater cooking self-efficacy compared with those who self-assessed as either marginally food-insecure or food-insecure ( $P \leq 0.05$ ).

Learning to cook is also an example of social cognitive theory in practice, with observational learning, modeling, and self-efficacy as key aspects of learning and practicing cooking skills, enhanced by social support (Bandura, 2001, 2004). Lang and Caraher (1999) have observed that behavior change is dependent upon knowledge, attitudes, and skills, and that cooking is a perfect example of the intersection of all three.

Individuals who can cook have the opportunity to exert their locus of control, expanding their food choices and ability to care for themselves and their families.

### **Adolescent Health and Eating Behavior**

Studies that have focused on adolescent health and eating behavior have confirmed general patterns of unhealthful eating behavior and made evident the need for studies addressing adolescents' experiences in and perceptions of cooking. For example, self-reported health status among adolescents has been declining over the last decade. Cui and Zack (2013) found that in 2009-2010 the percentage of adolescents in the United States who reported that they were in excellent or very good health was significantly lower than in 2003-2004. Between 1976–1980 and 2009–2010, obesity among adolescents aged 12–19 increased from 5.0% to 18.4% (Fryar, Carroll, & Ogden, 2012). According to the 2011 Youth Risk Behavior Surveillance, the percentage of obese high school students increased between 1999–2011, and the percentage that drank three or more glasses of milk per day decreased during this same period (Centers for Disease Control and Prevention, 2012). The 2010 National Youth Physical Activity and Nutrition Study (NYPANS) found that Non-Hispanic black students and Hispanic students' consumption of vegetables was significantly lower than non-Hispanic white students (Centers for Disease Control and Prevention, 2012). However, the prevalence among high school students who reported having eaten vegetables three or more times per day increased from 2009 (13.8%) to 2011 (15.3%). In addition, during 2007–2011, a significant decrease occurred in reports of the prevalence of having drunk soda two or more times per day (24.4%–19.0%). Could it be that the prevalence of overweight and obesity may finally be spurring an awareness that dietary behavior matters?

New Mexico is a culturally diverse state that became the 47<sup>th</sup> state of the United States in 1912. In 2013, the total population was estimated to be 2,095,159, with race/ethnicity estimated at 46.4% Hispanic/Latino, 41.3% White, 8.7% American Indian or Alaska Native, 2.1% African American, and 1.5% Asian or Pacific Islander. The number of families living in poverty in New Mexico is 21.0%, versus 15.7% nationally, and the state has the 35<sup>th</sup> highest rate of unemployment (NM Department of Health, 2013a, 2013b). According to the U. S. Census Bureau (2013), 16.3% of the population does not complete high school, compared to a national rate of 14.1%. New Mexicans are also less likely to have a Bachelor's degree, with 14.6% compared to 18% in the rest of the nation (U.S. Census Bureau, 2013). Feeding America's Map the Meal Gap 2012 report indicates that in the United States 15.9 % of the total population, and 18.6% of New Mexicans (an estimated 387,100) meet the definition of being food insecure. In 2012, the National Center for Chronic Disease Prevention and Health Promotion reported that 59% of New Mexico adults were overweight, with a Body Mass Index of 25 or greater, and 25.1% were obese, with a Body Mass Index of 30 or greater. For New Mexico adolescents, 14.6% were reported as overweight ( $\geq 85^{\text{th}}$  and  $< 95^{\text{th}}$  percentiles for BMI by age and sex), and 13.5% as obese ( $\geq 95^{\text{th}}$  percentile BMI by age and sex). Finally, according to the Annie E. Casey Foundation (2014), New Mexico ranked 49<sup>th</sup> out of 50 states as the worst for overall child well-being.

The 2011 New Mexico Youth Risk and Resiliency Survey (YRRS) included only one nutrition question: "During the past 7 days, how many times did you drink a can, bottle, or glass of soda or pop, such as Coke, Pepsi, or Sprite? (Do not count diet soda or diet pop.)?" [NM Department of Health (NMDOH) and the NM Public Education

Department (PED), 2011, p. 65]. Results revealed that 27.9% drank one or more soda per day, which was not a statistically significant difference from the overall rate of 27.8% in the United States. Analysis showed no significant difference between racial/ethnic groups, but the prevalence of drinking soda decreased with higher levels of parent education, and students with lower grades (35.1%) were more likely to drink sodas daily than students who excelled academically (24.1%). In addition, survey results indicated:

The relationship between drinking one or more sodas daily and protective factors was strongest for “How many close friends drink alcohol once a week or more,” and “My family has clear rules and standards for my behavior,” and “At school I am involved in sports, clubs, or other extra-curricular activities.” [New Mexico Department of Health (NMDOH) and the New Mexico Public Education Department (PED), 2011, p. 68]

In other words, familial and social ties have been reported as protective factors for some adolescent health behaviors.

### **Influences on Food Practices**

This section of the literature review summarizes empirical research that has explored different levels of influence. A number of studies have approached these influences as independent variables or isolated factors, but others have addressed the interrelation of multiple levels of influence. Overall, they provide relevant background information and context, as they identify communication dynamics explored in this research.

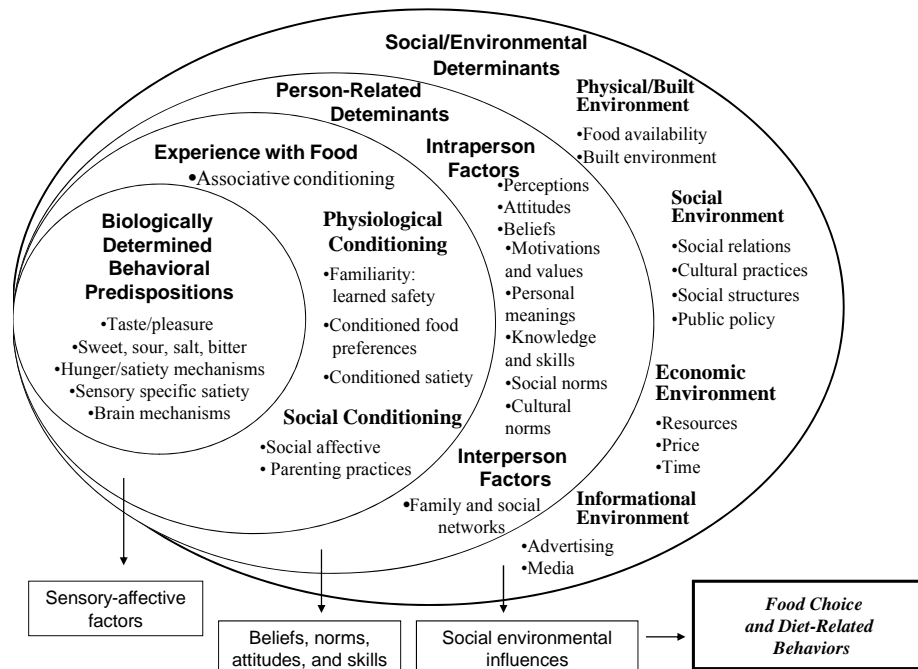
Ecological models have been widely used to study environmental influences on dietary patterns and other health behaviors (Sallis, Owen, & Fisher, 2008; Ding, et al.,

2012). In order to examine influences at all levels on food choices and eating behavior among adolescents, Story, Neumark-Sztainer, and French (2002) developed a conceptual framework based on social cognitive theory and used an ecological perspective to describe four levels of influence:

individual or intrapersonal influences (eg, psychosocial, biological); social environmental or interpersonal (eg, family and peers); physical environmental or community settings (eg, schools, fast food outlets, convenience stores); and macrosystem or societal (eg, mass media, marketing and advertising, social and cultural norms). (p. 40)

Contento (2011) illustrated the multiple levels of influence on eating behaviors (see Figure 2), with social and environmental influences shown as one level (p. 37).

**Figure 2. Social and environmental factors that influence food choice and dietary behaviors.**





A study conducted in the Lower Mississippi Delta utilized focus groups with adults to investigate perceptions of influences on food choice that either contribute to or detract from individual health. A number of participants spoke about the influences of family and social norms, with an emphasis on the importance of practicing healthy eating when young. One participant remarked:

If you eat unhealthy when you're young, you're going to be sick when you get old. I know a lot of kids that just overeat, and that's bad for them because the weight is there then. They'll get high blood pressure later, they're obese. (McGee, Thornton, Ndirangu, Simpson, Bogle, & McCabe-Sellers, 2008, p.105)

**Cultural and social norms.** The influences of culture and family are intertwined. The cultural pathways of everyday life are most often performed and preserved within the domain of the family (Weisner, 2002). Cultural influences on food practices range from food preferences to shopping habits to cooking/not cooking. Contento (2011) defined cultural norms as intraperson factors and social environmental determinants in her model of social and environmental factors that influence food choices and dietary behaviors. For example, as family traditions and familiar cultural foods support and confirm identity, geographically displaced people often cling to culturally valued foods, long after other cultural practices have been abandoned.

Although delving deeply into the topic of the impact of *structural violence* (Galtung; 1969; Farmer, 2004) is beyond the scope of this project, it is worth acknowledging that its impact stretches “far back in time and across continents” (Farmer, p. 315). In the Theresienstadt concentration camp during World War II, for instance, many of the starving women kept their sanity by recounting and recording the complex

recipes of favorite foods (German, 2011). Native American peoples who have had their traditional foods stripped away have experienced the dire consequences of historical trauma. When stressed through financial or other environmental issues, cultural repertoires and the inexpensive staples of regional cuisines have often been used as creative solutions to financial and other material hardship (Dean, Sharkey, Johnson, & St John, 2012).

Acculturation<sup>2</sup> studies of Latinos in the United States have largely detailed the detrimental health aspects of becoming Americanized. In a systematic review of the relationship of acculturation and diet among Latinos in the United States, Ayala, Baquero, and Klinger (2008) observed: “Consistent with other collectivistic societies, Mexicans, Puerto Ricans, and Cubans alike emphasize the family to a greater extent than non-Hispanics in the United States” (p. 9). In a study of social ecologies and their contribution to resilience, Ungar (2012) reported negative health outcomes due to acculturation, suggesting that acculturation:

is associated with negative behaviors among Latino youth such as smoking cigarettes, using drugs, and alcohol related problems. It is thought that the emphasis in American culture on independence and autonomy undermine cultural expectations for family ties, mutual support and social obligations. (p. 18)

Pérez-Escamilla (2009) reported that Latinos, compared to European-Americans, have significantly higher rates of poverty, food insecurity, obesity, and serious chronic diseases such as type 2 diabetes, especially among Latinos coming to the United States from rural areas. Pérez-Escamilla recommended further study to increase understanding

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<sup>2</sup> Acculturation: “the process by which individuals adopt the attitudes, values, customs, beliefs, and behaviors of another culture” (Abraído-Lanza, Armbrister, Flórez, & Aguirre, p. 1342).

about how acculturation affects Latinos in order to develop culturally appropriate health promotion interventions.

In a study that examined cultural transmission and food choice behavior of Puerto Rican girls from 10-18 years old, Bowen and Devine (2011) described four food choice types: “*everybody cooks, tradition keeper, seeker, and on my own*” (p. 290). They looked at acculturation using a multidimensional approach, reporting that acculturation can result in loss of cultural awareness and language, while maintaining an ethnic social orientation, including a preference for ethnic foods.

**Family influence.** Families most often exert the first and strongest influence on food practices. Through time spent together cooking and eating, families establish roles, share stories, build traditions and rituals, and create a shared identity. Manning (2006) observed that “Food acts as a metaphor for family life” (p. 1). Families are generally providers of nourishment, and family culture influences food preferences, attitudes, and values related to eating habits. In their research with adolescents, Story, Neumark-Sztainer, and French (2002) found that older teens were less likely to eat at home than younger teens. Gillman, et al. (2000) used a national sample of 16,202 children and adolescents aged 9-14 to compare the dietary quality between children who ate family dinner on most days with those who rarely or never at family dinner. This research found that adolescents who frequently ate family dinner consumed more fruits and vegetables and less fried food and soft drinks, and, overall, had more healthful dietary patterns.

The positive influence of family meals has also been found to have a lasting positive influence on dietary patterns. A study that investigated the nutritional quality of the diets of 16,000 sons and daughters (ages 9-14) of participants of the Nurse's Study

found that children and teens who ate dinner with their families had better overall nutrient intakes and consumed more fruits and vegetables, as well as increased intake of nutrients such as folate, calcium, iron and vitamins B6, B12, C and E. In addition, boys and girls who ate dinner with their families showed lower consumption of fat, soda, and fried foods (Gillman et al., 2000). A longitudinal study conducted in the upper Midwest with 1,700 students at 16 years of age, and then again at 20 years of age, found that family meal frequency during adolescence was a predictor of higher consumption of fruits and vegetables, dark-green and orange vegetables, and lower consumption of soft drinks during young adulthood. In addition, reported higher frequency of family meals predicted more breakfast meals among girls and more frequent dinner meals among both sexes, as well as higher priority for meal structure and social eating (Larson, Neumark-Sztainer, Hannan, & Story, 2007).

**Peer influence.** Among high school students, peer groups often substitute for families, and exert an important influence on high school students' food choices, even though cultural factors may mediate the stages of independence (Perry, Kelder, & Komro, 1993; Jennings, Parra-Medina, Hilfinger Messias, & McLoughlin, 2006). Story, Neumark-Sztainer, and French (2002) observed that empirical studies have revealed a "lack of consistent effects for peer influence on eating behavior" (p. S45), perhaps because adolescents view themselves as independent and autonomous and may not want to admit how much their behavior is influenced by peers or family members. Therefore, it may be difficult to assess social influences among adolescents by merely asking them about the influences on their food choices. Specific findings of the above study included recommendations for interventions aimed at both individual behavior change and

environmental change, and for further study to expand the understanding of the complex interrelationships that influence adolescents' eating behavior (Story, Neumark-Sztainer, & French, 2002).

**The influence of gender.** Several studies have revealed gender differences in food preferences. Caine-Bish and Scheule (2009) found that adolescent boys often preferred meat, fish, and poultry over fruits and vegetables, and girls preferred fruits and vegetables over meat and other fatty foods in early adolescence, with boys' preferences for fruits and vegetables increasing during high school. However, Cooke and Wardle (2005) reported that high school girls had higher preferences for fruits and vegetables than boys. Another study found that in households with adolescent girls, fewer less-healthy food items were available than in households with boys, which may suggest that adolescent girls may make different food requests or that girls in this study reported differently than boys (Ding, et al., 2012).

### **Communication and Eating Behavior**

Researchers have found that communicative practices can significantly promote or discourage development of healthy dietary patterns (Birch, 1999; Birch and Fisher, 1998). Communication research on this topic has largely focused on the effects of media and environmental influences in creating and solidifying barriers to healthy eating, especially those that convey physical and psychological reinforcement, contradictory social pressures related to food, and conflicting perceptions of healthy eating (Stevenson et al., 2007). As Haden (2006) observed, "Food implies communication through discourse, images, and foods themselves" (p. 268).

American children and adolescents are exposed to a plethora of food advertising, mainly focused on energy-dense, low-nutrient foods. Food marketing has seduced children and adults alike, using attractive models to induce people into believing that if they consume the 40-ounce Coke, they'll be happy, beautiful, and having fun (Dalmeny, Hanne, & Lobstein, 2003). It has been estimated that by the time American teenagers have graduated from high school, they have viewed, on average, 360,000 television advertisements (Dalmeny, Hanne, & Lobstein, 2003). Nutrition experts have suggested that the food industry has a role to play in marketing healthful foods (Nestle, 2002). However, in a free-market system, the corporate motive is the bottom line, with their only social responsibility being to maximize profits for shareholders (Simon, 2006).

Commercial interests and their marketing and advertising operations have played a key role in the development of the global food system, with the current "fast food" culture impacting a large segment of the population of the United States (Adams & Geuens, 2007). It has been argued that society has succumbed to the persuasive power of food advertising and is now at the mercy of corporate food giants (Nestle, 2002). These produce and market "nutrient-deficient factory-made pseudofoods" (Simon, 2006, p. xii). The World Health Organization (2009) and others (Cairns, Angus, & Hastings, 2009; Institute of Medicine, 2006; Livingstone & Helsper, 2004; Scully, et al., 2012) have found strong and consistent evidence that food marketing influences food preferences, purchases, and consumption among children and adolescents, especially of unhealthy foods and drinks.

Health communication efforts to promote consumption of fruits and vegetables have revealed effects related to patterns of media consumption and communication

channels, with more educated and affluent people tending towards consuming print and other news media, where health messages are often embedded (Dutta-Bergman 2005). In contrast, those who watch comedy or sports programming on television are often less educated, less affluent, and less likely to receive messages that promote eating fruit and vegetables. Yet, when using marketing and message theories in mediated public health campaigns, the success has been mixed, with research finding that a high level of message exposure is critical to achieving significant behavior change (Hornik & Kelly, 2007). The Centers for Disease Control and Prevention (2011) concluded that although public health campaigns have successfully targeted smoking cessation and to some extent drug use prevention, dietary behavior is a more complex issue.

However, although it has been found that media may pose a significant threat to healthful eating practices, health behaviors are shaped and nurtured by the home environment, and that interaction between adults and children may mediate the direct effects of both advertising and public health information campaigns (Rimal & Flora, 1998). One study utilized focus groups with Irish adolescents from 12 to 15 years old to investigate topics ranging from fast food and healthy eating to the Atkins Diet, vegetarianism, organic foods, and processed and genetically modified foods, aiming “to map out the variety of understandings of healthy eating among adolescents” (Stevenson, et al., 2007, p. 420). This research’s findings reiterated findings from other studies with adults that suggested that knowledge about nutrition and health does not necessarily motivate healthy eating behavior (Brown, McIlveen, & Strugnell, 2000; Story, Neumark-Sztainer, & French, 2002). In fact, a number of researchers have now become convinced that “the *experience* of eating in a specific environment may have more bearing on

consumption patterns and behavior than any supposed influence of food-related messages children receive” (Haden, 2006, p.269). In short, beyond media influence, other critical environmental factors identified in research include exposure to and accessibility of foods, social context of food experiences, and interactions with adults (Birch & Fisher, 1998; Birch, 1999; Contento, et al., 1995).

Social interaction through interpersonal communication is thus another salient influence that has been examined by researchers. People eat in a social context, with direct and indirect messages delivered by role models, including parents, peers, siblings, and others playing key roles in promoting or discouraging development of healthful dietary patterns (Birch & Fisher, 1998; Birch, 1999). As long ago as 1938, Karl Drucker (1950) found that children were more apt to follow other children’s food choices than adult food choices. Drucker hypothesized that although adults were perceived as authority figures, peer influence was more highly valued, due to social identification (as cited in Berenda, 1950).

Interpersonal communication and personal influence research have been applied to creating norms of fruit and vegetable consumption and accessible environments that promote healthful eating (Dutta-Bergman, 2004, 2005). Numerous studies have found that among young children, direct and indirect messages, including modeling and small group peer pressure, may significantly promote or discourage development of healthful eating behavior (Berenda, 1950; Birch & Fisher, 1998; Birch, 1999; Birch & Davidson, 2001; Haden, 2006). Peer models have even had the effect of increasing other children’s consumption of disliked foods (Hobden & Pliner, 1995).



### **Gaps in the Literature: New Directions to Explore**

The above literature review reveals that although the eating behavior of children and youth has been the subject of extensive research, the greatest attention has been devoted to attitudes, food preferences, and food choices. This review of research on food and culture also reveals striking disparities among economic and social classes, and among different racial and ethnic groups. This research on students' perceptions of the multiple influences on their eating behavior opens the scope of research and advances the understanding of food practices, including cooking, beyond choice and attitude. It also offers a perspective on the food practices of a culturally diverse group of students in New Mexico.

Although some studies suggest that cooking self-efficacy may play a part in increasing access to a healthful diet, more research is needed on the potential influence of cooking and cooking self-efficacy. In fact, there is controversy about the necessity to cook and the value of cooking education. It is encouraging to note that in the past 15 years, as the obesity crisis has gained wide attention, interest and support have increased for culinary and garden education, which encourage both physical activity and healthy eating. Bandura (2004) recommended that health promotion “be structured as part of a societal commitment that makes the health of its youth a matter of high priority” (p. 158). However, food and nutrition education is often considered “extra” in schools, rather than as a component of a required and vibrant comprehensive health education that prepares students to live healthy and productive lives.

Lastly, while food insecurity and commercial marketing have been found to be primary influences on the food practices of children and youth, there is a dearth of

research on the spheres of influence that impact high school students' food practices. This project explores these gaps, with a focus on the interrelated levels of influence on adolescent eating behavior, including the role and value of cooking in food practices.

### **Research Questions**

In light of the literature reviewed and goals stated above, the research questions that this project investigates are:

1. What do New Mexico high school students identify as the main influences on their food practices?
2. Among the students' perceived influences on their food practices, what is the value attributed to:
  - a. family and cultural heritage
  - b. interpersonal communication
  - c. the practice of cooking

### **Definitions of Key Concepts**

*Communication* has been defined as “a social process within a context, in which signs are produced and transmitted, perceived, and treated as messages from which meaning can be inferred” (Worth & Gross, 1981, p. 26), and as “a process in which participants create and share information with one another in order to reach a mutual understanding” (Rogers, 2003, p. 5). In addition, Littlejohn and Foss (2008) explained that “how we communicate about our experience itself forms or makes our experience” (p. 6). In this study, students will communicate through documentary photographs and written narratives, and through class discussions, interviews, and focus groups, primarily unmediated forms of interpersonal communication. Interpersonal communication is

defined here as “simply another name for interaction,” among two or more individuals, (Katz & Lazarsfeld, 2006, p. 82).

*Food practices* include food access and acquisition, food preparation, food preferences, and eating behavior (Mak, Prynne, Cole, Fitt, Bates, & Stephen, 2013). “Practices has a connotation of long-standing behaviors” (Contento, 2011, p. 148), as well as portraying “action as an ongoing embodied and situated social process” (Domaneschi, 2012, p. 308). Brittin and Obeidat (2011) stated that “food practices and food preferences are part of culture and are related to various aspects of culture” (552). *Food practices* will be used to encompass all activities related to food and eating. Food practices in this context are akin to foodways, the term used in folklife studies to describe food preparation, traditional meal preparation, and religious and symbolic uses of food, and gardening (Bartis, 2002). However, as this research will explore the multiple means through which high school students find and consume food, I choose to use *food practices* to encompass how food is procured, whether it is grown, gathered, purchased, or received from others; if and how food is assembled or cooked; if and how it is shared; and the personal, social, and cultural factors that affect these processes.

*Influence* is “a way of having an effect on the attitudes and opinions of others through intentional (though not necessarily rational) action” (Parsons, 1963, p. 38). Within networks of transmission, “key communications roles—initiators, transmitters and influentials—can be identified and these, in turn can be related to *nomination*, social *location* and cultural *certification*” (Katz & Lazarsfeld, 2006).

*Cultural influences* refer to shared meanings by which individuals and groups enact systems, values, and norms in a dynamic, living process. Cultural influences may

be derived from societal forces, religion, country of origin, community, and family. Yep (2001) described culture as “a contested, conceptual, discursive, and material terrain of meanings, practices, and human activities within a particular social, political, and historical context” (Collier, Hegde, Lee, Nakayama, & Yep, p. 231). Yep argued that when studying culture and communication for social change, “social justice, progressive social change, and ethics must be embodied” to make a difference in the world (Collier et al., p. 231). Media discourse provides a platform for diffusion of cultural values.

*Social influences* include community level influences such as social networks, norms, and community expectations (Contento, 2011). Such community influences “include social networks and norms, or standards, which exist as formal or informal among individuals, groups, and organizations” (National Cancer Institute, 2005, p. 11). Another type of social influence is public policy, which includes “local, state, federal policies and laws that regulate or support healthy actions and practices for disease prevention, early detection, control, and management” (National Cancer Institute, 2005, p. 11). Media and advertising practices may include social marketing as an influence on quotidian food practices.

*Interpersonal influences*. Katz & Lazarsfeld (2006) have defined interpersonal influences as the influences of person-to-person communicative interactions within groups, including family members and people who are considered experts (Katz & Lazarsfeld, 2006). Within the socio-ecological model, interpersonal influences are social networks, which include “family, peers, coworkers, and those in various organization to which individuals belong” (Contento, 2011, p. 122). These relationships strongly influence individuals’ food practices. These may also include teachers and any others

within individuals' spheres of interaction. These groups "provide social identity, support and role definition" (National Cancer Institute, 2005, p. 11).

### CHAPTER 3: METHODS

The methodology guiding this research privileges the gathering of qualitative data with the goal of advancing the understanding of high school students' perceptions of what influences their food practices—from their families and individual peers to groups of peers as well as cultural and social influences, including cooking and exposure to commercial and public health messages. People generally eat in a social context; therefore, examining social practices, especially the interplay of agency and social structure, may facilitate understanding how “social structural properties” are integral to food choice practices (Delormier, & Frohlich, & Polvin, 2009).

The aim of the project is to reveal nuanced, first-person, intersubjective perspectives that would not be possible to gather using a quantitative, positivist approach. Hence, this research is informed by the interpretive paradigm, which focuses on understanding processes of meaning making through social interaction and acknowledges the intersubjectivity of meaning produced through the collaborative relation between researcher and participants. Miller (2005) has suggested that interpretive communication research may be useful to understand the intricacies and nuances of human interaction. In addition, research that emphasizes cultural understanding rather than predictive power is typically aligned with the interpretive paradigm in health communication, with “meanings co-constructed . . . and located in the communication between the researcher and cultural participants” (Dutta, 2008, p. 73). Finally, an interpretive approach calls “for the imaginative understanding of the studied phenomenon” (Charmaz, 2006, p. 126); in other words, it is a creative process that values faculties of attention and understanding as tools to unveil emergent patterns of meaning.

The epistemological, ontological, and axiological assumptions of the interpretive paradigm fit squarely within a constructivist approach to research methods. The ontological assumption, or nature of knowledge, within the interpretive paradigm situates individual and collective reconstructions of reality in relativistic terms, as “local and specific constructed realities” (Guba & Lincoln, 1998, p. 203). The epistemological assumptions of the interpretive paradigm both utilize transactional subjective means to analyze and create findings. The axiological assumptions of the interpretive paradigm overlap critical and constructivist approaches, which value transactional knowing as a means to social emancipation (Guba & Lincoln, 2005). These assumptions were particularly applicable in this study, for it seeks to directly learn from participants about the factors that can lead to equitable health-promoting practices in society.

This project employed interpretive methods to collect and analyze visual and narrative data. Specifically, the research engaged participants from a population of high school students in the production of their own visual, written, and oral narratives with the expectation that these data sources would offer insight into the participants’ perspectives on their food practices. Preliminary research found that participants’ perceptions through photographs versus verbal or written documents revealed differing points of view. Photographs starkly illustrated contrasts between traditional food practices and current fast food culture, while discussion and essays did not necessarily overtly address these concerns. By collecting complementary data sources, the research opens space for a more nuanced and rich exploration of the students’ perceptions and narratives.

The following sections of this chapter provide: 1) discussion of folklife studies, self-reflexive photography, and focus group and interview as the methodology that

inform this investigation; 2) explication of the research design and rationale for selecting the methods of data collection; and 3) procedures followed for data analysis.

### **Data Collection**

Youth experience the relationships between family, food, and eating habits, and patterns of family communication about food, through a diverse range of communicative practices, including metaphors, stories, rules, roles, and rituals (Manning, 2006). In order to capture the multiple layers of influence, the project utilized varied methods of data collection.

**Folklife studies.** Folklife studies are about “the traditional, expressive, shared culture of various groups” (Bartis, 2002, p. 1). Of particular interest to this research is the fact that folklife studies have long included visual documentation and recording of stories, with some research focused on foodways, including food preparation and recipes, traditional meal preparation, symbolic and/or religious uses of food, gardening or farming, and especially the traditions and customs of family life (Bartis, 2002). Bartis’ manual on folklife and fieldwork (2002) described documentary fieldwork as a scholarly endeavor that required first-hand observation. Bartis identified the three parts of a folklife field project as: 1) background research and preparation/planning, 2) fieldwork activities, and 3) organizing and preparing work for preservation or presentation.

Falk advised that any researcher, but especially one who asks participants to intimately reveal themselves, must know their own heart and purpose and act accordingly (Falk, 1995). Her perspective emphasized the “mutual respect that comes from working together, a process which breaks down cultural stereotypes” (Falk, 1995, p. 4). She has directed her students to keep cultural respect and sensitivity in the forefront of their work,



including taking consent and privacy seriously, and remembering to bring the research back to the community. Especially important, Falk cautioned, was to not presume to know the answer or the condition of those whose lives one seeks to reveal to the world (Falk, 1995).

Falk's folkways methods and resources were shared with student participants in this research to engage them in thinking about how they would proceed with their individual projects. L. Falk (personal communication, March 1, 2012), has developed materials that clearly lay out how to conduct folkways projects with students, using questions similar to journalism's main queries of who, what, when, why, and how, but with the focus of telling in-depth stories. Falk (1995) has also guided her students to look at how the project will make a positive contribution to the community and, at the outset of the project, to answer these three questions: "What do you want to know? Why are you interested in finding out about it? What is the most important thing that you want to know about the topic?" (Falk, 1995, p. 36-37).

**Visual research methods.** Visual research methods have been employed in qualitative research through the use of visual arts, primarily photography (Collier & Collier, 1986). My approach is informed by the work of visual researchers who have theorized the relevance and power of this method. As Becker (1986) observed in his classic essay, photographers study visual images as others give attention to scientific papers or complex poetry. Visual research methods involving participant-produced images range from reflections on illness to exploration of one's personal stories and identity through still photographs and drawing, to video diaries of personal narratives which may reveal, conceal, or fictionalize identity (Riessman, 2008).

In the 1930s, Walker Evans, Ben Shahn, Dorothea Lange, and others used “the camera as an instrument of social awareness, of political ferment, showing how people were struggling with the consequences of the Great Depression” (Coles, 1997, p. 109). Dorothea Lange and Paul Taylor eloquently captured the condition of so many. Images and words together have been used in documentary work to exemplify the old saying that the whole is greater than the sum of its parts (Agee & Evans, 1941, p. 114).

In his documentary work, Coles (1997) wrote about the nuances of people’s lives that he was privileged to share. Coles was keenly aware that this work required “an interest in what is actual, what exists, rather than what one brings personally, if not irrationally, to the table of present-day actuality” with the understanding that it is always filtered through human perspective and grounded in time and location (Coles, 1997, p. 5). He observed that we must acknowledge ourselves, as we are the instrument of observation, and our interest determines what we see. In other words, “who we are, to some variable extent, determines what we notice and, at another level of intellectual activity, what we regard as worthy of notice, what we find significant” (Coles, 1997, p. 89). Coles viewed the work of understanding the human mind and resilience when faced with difficult circumstances as a powerful journey:

a passage across boundaries, . . . a movement toward the sacred truth enshrined not only on tablets of stone, but in the living hearts of those others whom we can hear, see, and get to understand. Thereby, we hope to be confirmed in our own humanity—the creature on this earth whose very nature it is to make just that kind of connection with others during the brief stay we are permitted here. (1997, p. 145)

Coles greatly admired James Agee and Walker Evan's work, *Let Us Now Praise Famous Men*, the heart-wrenching story of the lives of tenant farmers in the American South during the Great Depression, and described this provocative work as an expression of "rage as well as penetrating, large-minded lyricism" (Coles, 1997, p. 3). Agee's and Evans' book, undertaken initially as a magazine assignment that failed, became an eloquent record of an era of human suffering in the United States. Coles emphasized that knowing one's own intent is critical in this work:

What kind of moral and psychological accountability should we demand of ourselves, we who lay claim to social idealism, or to documentary tradition that will somehow (we hope) work toward a social good—expose injustice, shed light on human suffering, or contribute to a growing body of knowledge? (1997, p. 74)

The goal of documentary work is to clearly observe what is taking place in a situation, whether in a family or a community celebration, or with one individual. Agee described documentary work the pursuit of "human actuality" (Coles, 1997, p. 87), which Coles (1997) confirmed, stating, "we notice what we notice in accordance with who we are" (p. 7). He cited William Carlos Williams' statement that most of the time we're not really seeing, we're remembering—and that remembrance often gets in the way of being able to see what's really in front of us (Coles, 1997).

Falk, who has worked with high school students who reported cultural stories through visual documentation and narrative methods, defined her goal as a teacher to help her students "see, truly see—your every-day world, and yourself, with new eyes" (Falk, 1995, p. 5). This is a conscious choice, with the understanding that our background and interests will of necessity influence what we see, but that the goal is to respectfully and

accurately tell the story that is happening in the flow of life before your eyes. Agee & Evans (1960) described this work as “a kind of love that is handed over to others” (p. 268).

*Self-reflexive photography.* Just as food symbolizes life and culture, visual representations illustrate and interpret daily life. Images have the power to evoke emotions instantly and to illuminate new perspectives. Photographers have long provided the etic view: from Henri-Cartier Bresson—who focused on capturing “the decisive moment”—to Walker Evans, Dorothea Lange, and Robert Frank. Documentary photographer Sabastião Salgado, for example, described the emic viewpoint of participant photography as “working to bring new voices to photojournalism . . . (and to) hear the world through their eyes” (Hubbard, 2010, p. 23).

More recently, photojournalists-turned-educators, especially Wendy Watriss, Wendy Ewald, Jim Hubbard, and Josh Packard, have been moved to democratize photography. Muniz (1996, 2009), a creative outlier, who, along with Hubbard, acknowledged Paulo Freire as an inspiration in empowerment education and social activism, has taken the power of photography and focused it on education and social change.

Hubbard founded “Shooting Back” in 1988, after 25 years as a photojournalist, and a student of theology. After travelling the world, Hubbard reflected on the poverty and suffering that he had witnessed and wanted to do something to support positive social change. He saw the promise of people telling their own stories through participatory photography. Hubbard (2010) observed that the point is to “democratize the power dynamic in the producer/audience paradigm” (p. 7). He began this new chapter in his life

by giving his camera to homeless children to photograph their world in the homeless shelter where they were staying. That program, The Children of Hope Media Center, gave rise to Shooting Back. The first project received worldwide acclaim. The name was coined from a comment by a young homeless participant in the program, who replied, when asked why he was taking photographs of his world, “I’m shooting back.”

Hubbard has worked with children and teens, co-founding the Institute for Photographic Empowerment, a project of Venice Arts. One project gave youths digital cameras to photograph images that they believed influenced their health behaviors, including fast food outlets, liquor stores, and evidence of pollution in their community. Two main themes were revealed: food and stress. Discussion among the teens showed that the youth were concerned about the current obesity epidemic and want to effect change.

Packard (2008) followed Hubbard’s lead, working with homeless people, mostly adults. He appreciated how participatory research methods have evolved as part of an effort to “decrease the power differential between the researcher and the researched” (Packard, 2008, p. 63), with the purpose of creating a more ethical ethnography and to generate new forms of knowledge and understanding. Packard also emphasized that, just as with employment of Community Based Participatory Research, one cannot assume that a particular method will alter or reduce the power dynamics and imbalance of a whole society. But, quoting Foucault (1980), he noted that “power and knowledge have a mutually reinforcing relationship.”

In 1983, Wendy Watriss co-founded *FotoFest*, an international photographic arts and education organization based in Houston, Texas. Watriss reenergized the field with

her activist notions; she recognized that photojournalists could use their work as a medium for social change. FotoFest created a platform for art and ideas, with the purpose of expanding opportunities for photographers across the globe to present and distribute their work. Watriss (2010) described how from the 1920s through the late 1960s print-based photojournalism was a strong influence on public opinion. Television took over, and now the Internet offers a vast reach. Watriss challenged photojournalists to think past the traditional boundaries of the profession to examine the benefits and limitations of different methods of distribution in order to get the attention needed to exert power in order to bring about social change.

In 1990, FotoFest initiated “Literacy Through Photography,” a year-round education program. In collaboration with photographer-educator Wendy Ewald, Watriss saw the potential for enriching education through use of the medium of photography. Ewald’s goals have been to develop the visual and writing skills of children and youth, to inspire them “to explore their own ideas of composition” (Ewald & Lightfoot, 2001, p. 17). Ewald has continued to teach “Literacy Through Photography,” and has produced a number of books to educate teachers and photographers about how to do this work. She has been both lauded and criticized for her collaborative work with children, which has sometimes blurred the lines between professional and participant photographers (Hubbard, 2010).

Ewald, Hyde, and Lord (2012) provided simple guidelines to begin working with students to tell their stories, such as asking students to write a one-line idea that describes the story embedded in a photograph. They described three goals that are helpful to students in reading a photograph: look carefully at the details in the image, decipher the

story shown in the photograph, and identify and understand the choices that the photographer made in order to communicate the story or feeling (Ewald, Hyde, & Lord, 2012, p. 26).

*Photo-elicitation and photovoice.* Photo-elicitation is one of a number of image making research methods that expands data generation beyond more traditional forms of language-based methods such as interviewing and focus groups (Guillemin & Drew, 2010). Collier introduced the practice of photo-elicitation in 1967. Photo-elicitation has been defined both as use of photographs taken by others to elicit participant reflection and as use of participant-generated images to generate discussion or reflection (Collier, 1967). This method engages participants (or researcher) in using photography as a means of expression, and then asking the participants to reflect on their photographs to elicit the meaning of the images. A number of studies have used photo-elicitation methods to explore and reveal the perspectives of children and young people (Rasmussen, 2004).

Complementary to photo-elicitation, the method of photovoice was developed in 1995 as an instrument of social change by Wang and colleagues, and was first used as a means for rural Chinese women to communicate health messages to policy makers (Wang & Burris, 1997). The original goals of photovoice were:

1) to enable people to record and reflect their community's strengths and concerns, 2) to promote critical dialogue and knowledge about important issues through large and small groups discussion of photographs, and 3) to reach policy makers. (Wang & Burris, 1997, p. 370)

The slogans used by organizations to promote photovoice have synthesized the intent of photovoice: "Empowering people through photography"

([photovoiceinternational.org](http://photovoiceinternational.org), 2013) and “Participatory photography for social change” ([photovoice.org](http://photovoice.org), 2013). Photovoice has been touted as a means to reveal and illuminate social injustice and to propel positive social change. In a review of photovoice used in public health and related disciplines, Catalani and Minkler (2010) found that only projects that were more participatory achieved the original goals of Wang and Buris (1997).

Participant-produced photography has typically been used with marginalized groups, with the aim of understanding an issue from the participants’ point of view, and reducing the power differential between researcher and participants. Early efforts in such participant-produced photography involved giving film cameras to participants, which was costly and often required use of unfamiliar technology by participants. With such equipment, the power differential between researcher and participant was in the forefront, as the researcher had to teach participants how to use the instrument. However, the cost of this type of research has been substantially reduced due to low-cost digital imaging cameras, and even cell phones. Using current technology, especially among young people who have grown up with cell phones, this power differential has been further reduced (Packard, 2008).

In this project I employed both the methods of photovoice and photo-elicitation, as some of the participant-produced photographs stood on their own as expressions of the students (photovoice), and, as part of the project, the students chose one image to focus on in the process of reflection (photo-elicitation), and finally edited their photos and spoke about those images at length.



**Focus groups and interviews.** Focus groups, or group interviews, and individual interviews are used as qualitative research methods to directly interact with and gather information and perspective from a group of individuals or a single individual. Glesne (2011) has suggested that focus groups can be successful with groups of relatively homogenous groups of individuals who are comfortable expressing their points of view in a group. Focus groups have been found useful in reflecting on prior programs or experiences (Krueger & Casey, 2009), and have also been considered a means of triangulation with other data sources (Mason, 2009). As Mason suggests, triangulation in qualitative research allows the researcher to approach the research questions from various angles in order to acquire a well-rounded perspective in the research.

For this project, semi-structured focus groups (Denzin & Lincoln, 1994) were employed to explore students' perspectives on students' photographs and written work produced during the food project intensive. In addition, to increase "depth, nuance, complexity and roundness in data" (Mason, 2002, p. 65), follow-up interviews were conducted as an extension of the photo-elicitation process, which allowed the students to select and reflect on the photographs that they had produced during the food project. As Lindlof and Taylor (2002) pointed out, "interviews are particularly well suited to understanding the social actor's experience, knowledge, and worldviews," and are particularly useful in "verifying, validating, or commenting on information obtained from other sources" (Lindlof & Taylor, p. 173).

### **Research Design**

Drawing on personal influence theory (Katz & Lazarsfeld, 2006; Ratzan, 2011) within the context of the socio-ecological model in health communication

(Bronfenbrenner, 1979; Dearing, 2003; Sallis, Owen, & Fisher, 2008; Stokols, 1996) and nutrition education research (Contento, 2011), the project used the qualitative methods described above to maximize the collection of first person perspectives of high school students to investigate their perceptions of the influences on their food practices.

**Site and Participants.** The study site and participants were chosen using a criterion-based convenience sampling strategy (Creswell, 2007). The criterion was that of an ethnically diverse, accessible public high school with students from varied socio-economic backgrounds in New Mexico. I was acquainted with teachers and administrators at the school, which facilitated access to conduct the research. The school profile described the student body as 58% Hispanic, 37% white, and 5% other, with 57% qualified for free/reduced price school meals. The school population reflected the demographic trends in the New Mexico public school system, where the ethnicity of students reflects a growing Latino population. In 2010, the 40th Day Enrollment by District Report showed the following distribution: 56.6% Hispanic, 28.4% White, 10.7% American Indian, 2.6% African American, and 1.4% Asian (NM Public Education Department, 2010). For several years, the school had a focus on sustainability, with a school garden and cooking program; a year and a half before this research commenced, the cooking program was discontinued. The garden remains and is used for afterschool activities related to food production. The cooking and gardening programs are disclosed as it is possible that previous participation in these activities may have influenced the participants. However, many of the students were not at the school during that period, and only two students reported participating in the school garden in middle or early high school.

The participants in the study were fourteen 11<sup>th</sup> grade students who attended one core academic class for an average of one-hour five days each week. Six of the students were female and eight male. The majority of the students were Latinos, which is common in many schools in New Mexico where children of New Mexican and Mexican immigrant families constitute the majority. Eleven students identified as Hispanic/Latino/a, four as native New Mexican, one to three as first-generation immigrants from Mexico;<sup>3</sup> four to six as second-generation immigrants, with parents from Mexico; two as Anglo; and one as Native American. Additionally, six of the parents emigrated from Mexico to the United States, and seven have grandparents who still live there. Demographic surveys were completed by nine students; additional information was gleaned from focus groups or interviews. Reported frequency of family meals was: every day = 4; most days = 3; two to three times a week = 2; and rarely = 3. Six of the students reported that they lived with two parents; five with 1 parent (one with a single dad); and one with another relative. Two of the students said that their fathers were the primary cooks in their family. Three of the students reported having a part-time job during the school year. Several students revealed that they were the first in their family planning to attend college.

The data generated by student participants, including photographs and quotes, are identified using pseudonyms in the following chapters. A list of these pseudonyms with brief descriptors follows here. Female students are: Sofia, Hispanic/Latina of Mexican descent; Candelaria, Hispanic/Latina of Mexican descent; Emily, Anglo; Shasta, Native American; Lucia, Hispanic/Latina from New Mexico. Male students are: David,

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<sup>3</sup> It was unclear if two of the students were born in Mexico or in the United States. Due to immigration issues and concerns, this was not surprising and I did not press the point.

Hispanic/Latino from New Mexico; Lucas, Hispanic/Latino of Mexican descent; Vicente, Hispanic/Latino of Mexican descent; Miguel, Hispanic/Latino of Mexican descent; John, Anglo; Santiago, Hispanic/Latino and first generation immigrant from Mexico; Franco, Hispanic/Latino from New Mexico.

**Procedures.** This project enlisted high school students in documenting their food practices and sharing their perspectives on food through their own eyes and voices. Multiple modes of communication were employed to provide opportunities for students to communicate about the interpersonal, social, and cultural influences on their food practices. The rationale for using participant-produced visual and narrative data was to access students' points of view as directly as possible. Photographic methods were used for their "unveiling potential" (Dion, 2011, p. 315), to draw out students' views on the topic with the intent of revealing emic perspectives of the students (Hudson & Ozanne, 1988; Woodside, 2004; The Innovation Center, 2008).

Prior to data collection, IRB approval from the University of New Mexico was obtained and consent forms were signed by parents and students.

There were three main genres of data collected in this project: 1) student photographs of food in context; 2) student writings; and 3) transcripts of focus groups, class discussions, and follow-up interviews. The high school students participated in a seven-day intensive visual and expository inquiry into their food practices, aligned with Falk's (1995) recommended procedures (see Appendix A, Food Project Schedule). During this time, students were asked to photograph their food practices for five days, and to compose several essays about food, including a photo-elicitation exercise where they chose one of their photographs to use as the focus of an essay on the topic of the

connection between food and family/culture or how the photograph illustrated or interpreted facilitators or barriers to cooking. One month later, two focus groups were conducted: one with girls, and the second with boys. Follow-up interviews, centered on student-selected photographs, were scheduled and implemented a year later, as students were poised to graduate from high school. The data were supplemented by demographic surveys and field notes. Each of these methods was used to address the project research questions, with data collection focused on the first-person perspectives of the students in order to identify the students' perceived influences on their food practices.

*Student photographs.* Student participants were asked to photograph and log all food practices for five days, with a suggested total of at least 100 photographs. The students were directed to take photographs of everything that they ate for this period of time, including 1) where they were, 2) what they ate, 3) who they were with when they ate, 4) who prepared the food, 5) how the food was prepared, 6) how much it cost, and 7) where the food originally came from. It was planned that a selection of the photographs would be shared with the students in a presentation to be used as a basis for class discussion. Note: Cameras were loaned to the students from the school, although a few students chose to use their own cameras for the project.

*Student writings.* The students were directed to engage in self-reflective writing, including essays on food memories, a photo-elicitation essay that explicated one of their own photographs, and a final project essay in which students were to compare and contrast the food memory that they initially wrote about with their daily food practices, including descriptions of who and what influences what they eat every day. In addition, students were asked to each develop three questions for use in conducting an audio or

video-recorded interview about food and/or cooking with a peer family or community member.

*Focus groups, class discussions, and interviews.* Focus groups, class discussions, and interviews were conducted to complement the above methods of data collection, and to provide triangulation for the purpose of answering the project Research Questions, stated above. The focus group guide was constructed to elicit responses from students about their views on food and cooking, the influences on their food practices, as well as reflections on the food project (see Appendix B, Student Focus Group Guide). Two focus groups were conducted, one with girls and one with boys, as gender differences have been identified in food preferences among adolescents (Caine-Bish & Scheule, 2009). In addition, two class discussions during the food project were conducted. Finally, focusing on data generated and collected during the food project, follow-up interviews were conducted with students one year subsequent to the focus groups. These interviews were intended to provide “depth, nuance, complexity and roundness in data” (Mason, 2002, p. 65), and served as a means of increasing understanding of the students’ perspectives, including providing member checking applied to the visual data. All of the above were recorded and transcribed.

*Additional data.* Demographic surveys and participant-observer field notes were used to provide contextual information for use in analysis. Field notes were employed to record impressions of the classroom, moods, and interactions among the participants. As a participant-observer, during the active food project I was usually engaged in facilitating activities during class time, but reflected in field notes subsequent to the class periods. Field notes were also employed to record important points during recorded sessions.

**Description of the data.** From February through April, and again in February and March of the following year, I was engaged in data collection at the school site. Prior to data collection, I met with the school principal and teacher, and observed the class in action several times.

*Student photographs.* 753 digital photographs made by the 14 students were submitted as records of the students' food practices. Students were directed to photograph what they ate, who they ate with, where they ate, where the food came from, who prepared/cooked the food or how it was made, and the cost of the food.

*Student writings.* Thirty-eight student papers were produced during the food project (see Appendix A, Food Project Schedule). These included 13 in-class writing exercises in response to the following direction:

Write one to three paragraphs that describe a food memory. The memory might be of a family food tradition or a food tradition from a culture that you identify with, or of something about food that a friend or family member shared with you or taught you about food.

Nine essays were written and submitted in response to the following direction:

What did you learn from documenting your food practices for five days?

Nine photo-elicitation essays were written and submitted in response to the following direction:

Choose one photograph to use as the basis for a two-page essay using one of the following writing prompts:

1. What does your photograph show about the connection between food and family and/or food and culture?

2. Describe how your photograph illustrates or interprets facilitators (that which makes something easy) and/or barriers to cooking.

One extra credit reflection was submitted, and six final project essays were turned in at the end of the project. The final essay prompt that was given to students was:

Compare and contrast the food memory that you wrote about with your daily food practices. What is the same, similar, or different? Who and what influences what you eat every day?

*Focus groups, class discussions, and interviews.* Two focus groups were recorded and transcribed, with a 37-minute focus group with five girls transcribed onto nine single-spaced typed pages, and a 48-minute focus group with eight boys transcribed onto 15 single-spaced typed pages. Two 10- to 15-minute class discussions were recorded and transcribed into six single-spaced pages. Interviews with 12 students were conducted to review five photos that each student selected for discussion. These interviews ranged from 22 to 46 minutes, and were logged in 82 pages of typed notes that contained thumbnail photographs and student quotes. Ninety pages of field notes were written to amplify and corroborate classroom activities and recordings of focus groups, class discussions, and interviews.

### **Data Analysis**

The analysis was conducted with the aim of understanding and articulating communication concepts and themes that were expressed by the students during the project. The analytical strategy was chosen to best address the project research questions and to maximize the intent of recording first-person perspectives. Data analysis was conducted using a grounded theory approach (Charmaz, 2006; Cho & Lee, 2014). The



analysis was rooted in the interpretive paradigm, chosen as the best fit to learn about and understand the perspectives of high school students from their individual vantage points as well as through social constructions. This approach follows what Glesne (2011) described as the ontological belief that the world “is socially constructed, complex, and ever changing” (p. 8). As Charmaz (2006) suggested in her interpretivist approach to grounded theory, techniques of grounded theory are a good fit to code many forms of textual data, including the student participants’ photographs, essays, participant-conducted interviews, transcripts of focus groups, individual interviews, and field notes.

Grounded theory is consistent with the goal of elucidating the students’ perspectives. The process of analysis entailed open coding and extracting *in-vivo* codes as the first step, investigating the data for salient categories and concepts, then looking deeper into the emergent concepts and patterns and thematic relationships through axial coding. The process allowed the researcher to use constant comparison to read the data for existent themes, and to minimize researcher bias.

The first step in the data analysis was to identify and select *in vivo* codes from student participants’ photographs, reflective writings, focus group transcripts, and follow-up interviews with students. Attention was given to coding of student-generated text, transcripts, and researcher’s field notes as “a useful analytic point of departure . . . to help preserve participants’ meanings of their views and actions in the coding itself” (Charmaz, 2006, p. 55). Charts containing these codes were made for each data source.

Second-level analysis involved extracting emergent concepts from the data sources and assessing frequency of concept occurrence. At this stage, charts were color coded, and subcategories delineated through a process that entailed going back and forth

between the data and the coding, especially through comparison of the visual images with text, logs, and transcripts. Triangulation of the data (Dion, Sitz, & Remy, 2011), through use of the multiple data sources, was conducted to assess accuracy and validity, with visual and textual data compared to identify confirming or differing perspectives.

Third-level analysis identified thematic relationships and tensions among salient concepts in the data. At this point, core themes emerged in repeated iterations throughout the data sources, illuminating patterns that allowed me to address the research questions.

In sum, this chapter outlined the qualitative methods and research tools utilized in the project, with justification for the multiple methods chosen. The use of visual, textual, and interactive methods of data collection indeed provided a set of rich and nuanced data. The three main types of data sources: photographs, written texts, and recorded focus groups and interviews, reinforced each other and as well as the information collected in the demographic survey and field notes. In the next chapter, I present the analysis of discussion of findings in answer to the research questions guiding this research.

## **CHAPTER 4: FINDINGS**

### **SPHERES OF INFLUENCE**

Chapters 4 and 5 present the results of the research. This chapter presents an analysis of high school students' first-person narratives about their perceptions of influences on their food practices in response to RQ 1: What do New Mexico high school students identify as the main influences on their food practices? In Chapter 5, I focus on thematic analysis of the data in response to RQ 2: Among the students' perceived influences on their food practices, what is the value attributed to: a) family and cultural heritage, b) interpersonal communication, and c) the practice of cooking. In these chapters, I analyze data from: (a) student-produced photographs; (b) student writings, including food memory essays, photo-elicitation essays, and final project essays; (c) transcripts of focus groups, class discussions, follow-up interviews; and (d) field notes. At the end of each of these chapters, I summarize results and discuss preliminary implications of the students' perceived influences on their food practices.

During the first stage of analysis, I organized all of the photographs made by the students and catalogued them by type of information presented in the images. Prior to follow-up interviews that took place a year after students took photographs for the food project, each student was asked to choose five images to represent her or his body of work from the project. The perspectives revealed through those images are the heart of this section, supported by student writings and transcribed focus group and interview data. As stated previously, student participants produced photographs in response to the following prompt: Photograph and log all food practices for five days that illustrate: 1) where you eat; 2) what you eat; 3) who you are with when you eat; 4) where the food

came from; 5) who prepared/cooked the food or how it was made; and 6) what was the cost of the food.

A chart catalogued the 753 photographs using the six questions posed, as well as by the types of foods shown (See Appendix D for description of foods photographed by the students), cooking appliances, and other images. The content of the student-produced photographs included food—from the raw form of a live animal to abandoned backyard gardens to food being prepared, food cooking, food on the table, and leftover food. The photographs also illustrated people cooking, eating, and cleaning up, sometimes with others and sometimes alone, in various locations, including in the car, at a dining table, in the living room, and outside. A number of cooking appliances appeared in the photographs, from a homemade deep fryer to microwave ovens, to bread machines, to different types of outdoor grills. In addition to propane grills, outdoor cooking was shown using a simple grate over a fire, on a disco (made from plow disc), and using a homemade deep fryer.

Examples of descriptive codes for the photographs included:

- 1) where you eat: *kitchen, dining room, outside, in car*
- 2) what you eat: *eggs (scrambled, fried, omelette), bacon, pancakes, turkey sandwich, peanut butter sandwich with jelly and oreo cookies, hamburgers with potato chips, soup, red chile, green chile, beans, rice, tortillas, popcorn, spaghetti, takeout foods (taco, burrito), roast meat, grilled meat—carne asada, capirotada, cupcakes, ice cream, fruits (oranges, apples, bananas, cantaloupe, pineapple, avocado)], chips, cold cereal, candy, and doughnuts*  
(See Appendix D, for details)

- 3) who you are with: *family (mother, father, sister, brothers, grandparents, cousins, extended family-neighbor), friends, classmates at school*
- 4) where food came from: no images showed shopping, but grocery stores appeared to be source of food, with one exception: a live cow that was slaughtered
- 5) who prepared the food: *self with sisters, self with friend, mother, father, grandmother*—how the food was made: *cut with knife, shredded, cooked on stove, grilled in backyard, deep fried outside, toaster oven, microwave, blended, cooked outside over fire*
- 6) what was the cost of the food, which none of the students showed in their photographs

Other images showed graffiti, school lockers, classroom, recycle sign, dead plants in pot, seeds sprouting in pot, cut flowers and flowering plants, grocery store badge, sculpture, foosball game at home, dogs, food magazine, streets, playing guitar, sky, abandoned backyard garden, TV, fast food outlets, videogame screenshot.

Visual and textual data revealed multiple influences on students' food practices. The coding of visual, focus group, and interview data revealed six main categories of influence:

- 1) family and cultural heritage (examples of *in vivo* codes: *culture, society, religious, tradition, memories, connection, fire, taste, spice*)
- 2) interpersonal influences of family and peers (examples of *in vivo* codes: *family, elders, grandma, grandpa, mom, dad, best friend, heart, loving, peace, care, joy, sadness, happiness, fun, talking, responsibility, helping, future*)

- 3) gendered roles (examples of *in vivo* codes: *grandma is in charge, mom is queen of the kitchen, dad grills, parents shop*)
- 4) economic factors (examples of *in vivo* codes: *cost, poor, hungry, budget, cheap, expensive, learn, grow, don't throw food away, cooking*)
- 5) commercial influence (examples of *in vivo* codes: *advertising, fast food, good food, junk, restaurants, fads, food commercials, quick, easy, time, ruin, lazy*)
- 6) perceived health outcomes (examples of *in vivo* codes: *healthy food, healthy eating, from scratch, satisfied, organic, body image (girls), being in shape, thin, sports, calories, diabetes, obese*).

In the sections below, I discuss these categories and present examples of the student-selected photographs. These are unedited with the following exceptions: images that include people have been cropped in order to remove identifiers, a few were sharpened, and one was color corrected to improve readability.

### **Influence of Cultural Heritage of Families**

Family and culture are inextricably intertwined, and cultural traditions are enacted, preserved, and evolve through family practices. All of the students in the project, regardless of ethnicity or country of origin, expressed strong attachment to and valuing of the cultural culinary heritage of their families. Among those with close ties to Mexico, as well as those whose families have lived in New Mexico for generations, it was more common to find a particularly strong view of the connection between culture and family, and both were repeatedly cited by the students as primary influences on their food practices. The photographs revealed, in many cases, a valuing of tradition, along with an awareness that a disconnect from one's cultural heritage may occur as families disperse

(especially into a dominant culture), and/or when living at a distance from grandparents and other relatives. The students expressed that both immediate and extended family generally had strong influences on their food practices. As the students were poised to go out on their own after graduating from high school, many expressed nostalgia for the anticipated loss of the warmth and security of family food traditions and practices.

**Cooking as enactment of tradition.** The following photographs (see Figures 3-18) illustrate cultural practices enacted through family food traditions. The images depict primarily food traditions from Northern New Mexico and Mexico (the cultures of the majority of student participants), but are interspersed with Native American food traditions and others. Discussion of food traditions among the students included both adherence to cultural practices and adaptation and evolution of traditional cooking practices due to food availability and health concerns. The students talked frequently about how important food is in their culture, with one student describing how get-togethers aren't just for special occasions, but that family and friends regularly come together to cook outside over a grill, then sit down and enjoy eating together.

The following visual and written narratives by the students suggest these associations:



*Figure 3:* “My mom was making *caldo de rez* [sic].<sup>4</sup> I picked it because it shows traditions back when my parents were small. My mom grew up on a farm and my dad didn’t. My parents didn’t have money to buy good food like a hamburger, but they could buy potatoes for 10 cents or whatever they could find and they would put it all together” (Candelaria).

My father comes from the south of Mexico. Zacatecas is a place where *nopales* and *tunas* grow on the fields, and everyone eats them. The south of Mexico is so much different from the north of Mexico. There's different traditions, and different native plates, but it still is Mexico. When my family comes from Zacatecas, I know they are going to make great food. I always love when all of my mom, aunties, cousins, and grandmas, come together in the kitchen and just start cooking. All of them know what everyone likes. They make the same thing every time they come. We never get tired of eating the same thing over, and over, again. (Candelaria)

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<sup>4</sup> *Res*, translated from Spanish to English is “beef.”





*Figure 4:* “It’s part of our culture, the spicy chile powder” (Lucas).



*Figure 5:* “My mom made this kind of soup, with shrimp, jalapenos. . . . I feel that when my mom cooks she does it with love. You enjoy the meal more when you actually taste it—when you have the presence of a loved one” (Vicente).



*Figure 6:* “Pretty New Mexican. Every meal has a tortilla—everyday life. It’s something simple and quick” (David).



*Figure 7:* “My mom was frying tortillas—we ate tacos as well; you can see there was meat in there that we had bought. Since the corn tortillas usually break easily, we usually dip them in oil and water—olive oil is fine. You just dip ‘em in, soak them a little bit, then put them on the pan. They’ll be softer and more flexible. The oil itself will just fry them and make them hard. With water, they’ll be softer and more flexible” (Santiago).



Figure 8: Tortilla basket. (Miguel)



Figure 9: “In Spanish it’s called *carne de res*. It has chile, onion, garlic, the ingredients are used every day. It has garbanzo beans . . . . Only my grandma is really in charge. She doesn’t like to let other people in charge, because they don’t do things right” (Miguel).

Candelaria described how to prepare *nopalitos*:

*Nopalitos* is a treat I been eating since I was a child. *Nopalitos* are raw cactus thin slices, with jalapeños, tomatoes, onions, avocado, and cilantro. After it is done you add a little of mustard and lime. It gives it the acidy taste which is the best. Salt and pepper go on it for more flavor. When everything is put together, she lets it sit for twenty minutes inside of the fridge. It is usually eaten cold, with anything.

The influence of cultural practices was not confined to those enacted on a daily basis, but to those that are practiced during special celebrations. Vicente described his family’s food practices: “I come from a background where food is a major aspect. My Mexican background is full of great foods: the *tamales*, *menudo*, *chile relleno*, *lentejas* and *caldo de rez*.”



*Figure 10: Lentejas (lentils) cooking. (Candelaria)*

The students associated many of their food memories with cultural traditions that centered on holidays or special occasions. Sofia recalled a Christmas food tradition in her family:

On Christmas night, after we have had *tamales* and *menudo*, my mom prepares a kind of dessert called, “*Buñuelos*.” She prepares the flour with brown sugar or just regular sugar and cinnamon. First she makes balls of flour and spreads them out like a tortilla. Next she fries the flour on a pan till it is well cooked, then sprinkles the mix of sugar with cinnamon on top. Now the delicious *buñuelos* are ready to eat. My mom makes about 50 every Christmas night.



*Figure 11: “Pan-dulce is an important part of my Mexican culture. Café de olla is a special blend of coffee with cinnamon and cocoa bean. In my family it is used to spend time with each other, friends, relatives, or to close business agreements with partners. It [pan-dulce] is not eaten in times of sorrow because of the bright colors” (Lucas).*



*Figure 12:* “When Good Friday comes, it brings my mother and I [sic] together. I’m always at school and playing sports. I never spend time with her. She’s always at work, comes home late, and tired” (Candelaria).



*Figure 13: Capirotada.* (Candelaria)

Shasta fondly described how her grandma cooks bread over an outdoor fire (see Figure 14, below), and how the older children are often asked to help.



*Figure 14: “That’s my grandma making bread at a fire” (Shasta).*



*Figure 15: Cooking bread on the fire. (Shasta)*

She expressed pride in her family’s cooking skills:

My family is full of wonderful cooks, chefs, bakers, etc. My papa grills all summer long. He also goes fishing with my uncles, (who don't like to buy fish from the store.) My nana makes the best pies, cakes, and homemade ice cream.

My father is the greatest at everything. He doesn't use measuring cups because he's that good. (Shasta)



*Figure 16:* “When someone gets married in my culture you give the family food and then they give it back to you a little later. That’s all the food we gave to them. A week before the groom’s family gives the bride’s family and around their one-year anniversary, the bride’s family gives food back to the groom. It’s not just food, there’s [*sic*] gifts too. Like blankets, TVs, and a saddle for a horse” (Shasta).

Most of the students photographed, wrote about, and discussed foods that they described as associated with their family heritages and traditional cultures. These included *nopalitos*, thinly sliced and marinated with jalapeños, tomatoes, onion, avocado, and cilantro with mustard and lime; *caldo de rez*, made with meat, carrots, squash, cilantro, potato, corn, rice and spices, served with *pico de gallo*; *tacos* made with boiled corn tortillas filled with Spanish rice, meat, lettuce, onions, and cheese; *quesadillas* made with *queso asadero*, *chorizo*, and chile slices; *menudo*, or “chewy cow stomach,” onion, garlic, cilantro, lemon, and chile and spices; roasted corn for *chicos*; frybread, ashbread,



cornbread, and ovenbread; fresh-caught grilled fish; shepherd's pie, made with onion, green beans, cheese, hamburger, tomato sauce, and mashed potatoes; and a family favorite originally from another culture: spaghetti with cheese cooked into the tomato sauce. One student took photographs and wrote about a shared meal with friends from a different background: Passover foods of bitter horseradish and sweet apples dipped in honey.



*Figure 17:* “This plate means to me family. That day we had fajitas with rice, bell peppers, spinach, in a flour tortilla.” (Candelaria)

A number of students also described how their family's cooking and choices of foods were sometimes disconnected from family tradition or cultural heritage and linked to various other cultures, whether they referred to foods eaten regularly or on special occasions. Most of the students seemed acutely aware of this dissonance, but not disturbed by it. Some of the friction between culturally-based food practices and daily eating habits was attributed to the mixing, melding, and diffusion of cuisines in a

globalized society, and some may be due to food availability, food preferences, and convenience.

Most of the food that I eat doesn't make sense because I live in an Hispanic household, but you would think that we would eat Mexican food, but we don't. But we eat Italian food—like spaghetti and my dad makes Chicken Alfredo—like a wide variety of food.” (Franco)



*Figure 18:* “Resurrection Sunday meal. The food represents an analogy of how New Mexico is brought in to be a part of the USA. Like red chile, New Mexico stands out as a Latino state within the grounds of the white people. New Mexico and its people had a hard time becoming a state, and chile is a good way to represent New Mexico. The two cultures are put side by side” (Emily).

Shasta stated: “My mom is awesome at making lasagna, casserole, and reeeeealy good at making *tteokbokki* (Korean street food: cylindrical spicy rice cakes), even though she isn't Korean” (Shasta). Other students mentioned enjoying Indian and Japanese foods. John recalled a family dish from his childhood:

I remember as a child eating a dish called shepherd's pie. I was sitting at my table and given a bowl of food consisting of mashed potatoes, tomato sauce, hamburger, green beans, and onions. I thought the food looked disgusting, but after taking a bite I discovered that it was very good. Over the years we have continued to eat this. Besides my mom's siblings, I've never met anyone else who eats this or who has even heard of it.

American hamburgers were not left out of the photographs or discussions (see Figures 19-20).



*Figure 19: Cooking hamburgers at home. (Candelaria)*



*Figure 20:* “This is my little sister and I picked this one because she’s not wearing any makeup and she’s in her natural habitat. She just looks so innocent. Last year when I took this, she was 11. She’s got a big, juicy burger and some chips and dip. My mom made that dinner.” (Lucia)

Unfamiliarity can result in misunderstanding of other’s traditions, as in this interpretation of the symbolism of foods from a Passover Seder.

Yesterday, we went to a Jewish church and took part in eating a Passover meal. They started off by having us partake in communion. Part of this was also for us to take in something bitter, and sweet to remind us of the hard times and the good times. They used horseradish for the bitter moment, and a sweet substance containing, apples, cinnamon and sugar. The bread they used was made without yeast, and they had grape juice to go with it. This symbolized Jesus' body and blood. (Emily)

The above evidence supports how the social meaning of food is constructed through the linking of familial and cultural practices. Food preferences and eating habits are both expressions and evidence of cultural identification.

**The family table—and elsewhere.** Home was identified by most of the students as the primary place of learning about and experiencing food. Where they ate at home was pictured in many of their photographs, some with people eating together, and some illustrating locations devoid of people. Many of the students' photographs showed kitchen or dining tables, rather than couches, as the places where their families ate. Family meals were shown in a number of the photographs (see Figures 23-26). It should be noted that the period of time when students were taking photographs for the project included a holiday weekend (See Figure 23).



*Figure 21: Easter flowers. (Arturo)*

Many students reported that in addition to having regular meals with their immediate families, on the weekends (especially on Sundays) they frequently gathered with extended family and friends for celebratory meals. Lucia observed, “My family is really big. About every week we have family dinners. I guess this just shows how close my family is.”

John remarked about his family’s eating habits: “In the U.S. most people tend to eat in the living room. I tend to do that a fair amount myself. It’s nice having a meal at the table without the TV playing.” Santiago continued, “We have a table in the dining room and that table is always used. We always have dinner together and talk about our day. It’s never silent at dinner. We never argue during the meal—well—maybe after [laughing lightly].”



*Figure 22:* “My grandpa always sits in the same spot. As long as I can remember, my grandpa has always sat in the same seat. I guess it makes him more of, I think of him as the head of the family. I guess he is—he started it” (Miguel).



*Figure 23:* “The tradition is to sit with the entire family and enjoy. The *pico de gallo*, with the corn tortilla and a cup of coca cola are all essential parts to the meal and the entire family” (Vicente).



*Figure 24:* A breakfast feast. (Shasta)

The above photographs show families eating together and illustrate how shared food is valued and has a central role in celebrations and during holidays. In addition, power dynamics and gender roles in families are illustrated. In stark contrast to these images, many of the students reported that they often eat alone, in a parked car, on the road, scrounge for food at home at odd hours, or eat in front of the TV.

**Where food comes from.** Congruent with the current food landscape, most students' families purchased food primarily from grocery stores and restaurants, including fast food outlets. Some families also shopped at farmers' markets and natural grocers. In addition, many of the students demonstrated an awareness of where food originates, especially as learned through traditional practices within their families. Seven of the students had experience growing fruits and vegetables or raising animals. Those experiences were sometimes tinged with regret or sadness, perhaps from loss of connection with far-away family members or those who have died, and/or from experiencing how challenging it is to grow food, and/or from lack of the opportunity to gain expertise in this area.

Many of the students expressed that they valued the knowledge and expertise needed to grow food, as gardening or farming was part of family and cultural practices for almost half of the students (see Figures 32-35). Seven of the students talked about growing food at some point in their lives. Two of the students had participated in working in the school garden:

I helped in my freshman and sophomore years here in the garden. I helped move a bunch of the manure one day. I think that the garden is really cool—it's pretty



amazing to come back at the beginning of the year and see all this growth.

(Franco)

Sofia spoke of her family’s efforts to grow some food: “We have peaches, apricots, plums, and tomatoes and my brother started growing chile—tomatoes and chile with special lights inside. He wanted to grow them really good so he had them inside.”



*Figure 25: Fruit tree in bloom. (Miguel)*

Few successes growing food at home were reported by the students.

“I planted corn and squash in the garden at school. At home, we used to have strawberries and tomatoes. The dogs trample everything” (David).

Lucia described her family’s efforts to grow food:

My little sister tries to make a garden. It’s really hard in New Mexico. My grandma grew little chiles and she has a tomato plant in little pots. My little sister tries to grow tomatoes and whatever she finds at the store—those little seeds.

My uncle has an acre and a half, but it's so hard—nothing would grow. Him and my little cousin. I just think that it's like the soil—it's really dry. I know that they would water all the time, but nothing would grow.

Several students expressed nostalgic, albeit conflicted, feelings about being closer to their food sources.

This is the backyard of my grandparents' house. My grandpa grows chiles. It looks different—it's like a garden, but behind the garden there's rocks. Over the years—it doesn't look like it's taken care of. He would make sure that it looked nice. A lot of the trees we had to take them out—we had to cut them off because they're dead. I would sometimes help him water, but that's about it. I still can't find it—a common ingredient—cilantro and parsley. Those two my grandma would tell me to go get cilantro in the garden and I couldn't find it. The first time she asked me I was 8 years old. Behind the fence that's where the apricot tree grew—that's where they grew cilantro. Up until today, I still can't find it—except once. (Miguel)



*Figure 26:* “The backyard of my grandparents’ house is not like any other house with green grass in the back. My grandpa takes care of the garden in the backyard during the summer. . . . My grandpa has 2 apricot trees, the small ones. I had a lot of them—I couldn’t wait to eat them and they weren’t ready” (Miguel).

Miguel reflected:

I remember all the times my grandma would ask to go get something for her from the garden. I could never find what she asked me to find [and] I would get screamed at and I would feel bad inside.

He added: “I [still] don’t know anything about planting fruits or vegetables.”



*Figure 27: Fall planter at school. (Sofia)*

Shasta also talked about her family’s efforts growing food:

My family back in Arizona has a farm. I think that it’s around this time [spring] that we would plant corn. Two summers ago we planted a garden here and planted tomatoes and squash. It’s very difficult (to plant corn) because you have to run around after this backhoe and put the little seeds in the ground . . . and be quick because the backhoe is going. (Shasta)

Several students had experience raising livestock with their extended families in rural areas, both in the United States and in Mexico (see Figure 30). Shasta wrote, “My grandfather can slaughter a cow blind.” Another student stated:

My grandpa has 3 pieces of land (*tierras*), or we call it in Mexico—*el llano* (where you grow food— flat area). He grows beans, he grows sorghum for his

cattle, and he grows corn. Lately, these past years there hasn't been much rain in Mexico—he grows a little bit of beans to eat and a little bit to sell. (Vicente)



*Figure 28:* “That’s a cow—my family was getting ready to butcher it for a wedding . . . . it’s kind of a spiritual thing.” (Shasta).

Shasta described the family working together to slaughter and butcher the cow:

I kind of bonded with the cow a little bit and so I was a little sad to see him get shot in the head. The butchering of the cow is a big, big long process. You have to kill it, then you have to clean it, then you have to cut everything up, then you have to dry it so it’s not all bloody. And you have to make sure that the dogs don’t get it. I think I’m a bit traumatized because I wash the organs and I feel their warmth; I can’t bring myself to eat it.

Growing food or raising animals was sometimes talked about in nostalgic terms, with a strong accent on the influence of cultural heritage.

When we go [to Mexico], my aunt [mom's sister] bought chickens so my mom could hear when the rooster starts to sing in the morning and we could have fresh eggs. She gets them [chickens and roosters] every time my mom goes to visit. It's a bunch of memories from when she (my mom) was young. After we leave, she sells the chickens or gives them to my grandpa. He's 70 years old and he is still cultivating his land. (Lucas)

The quality of produce was mentioned by several students. Lucas shared:

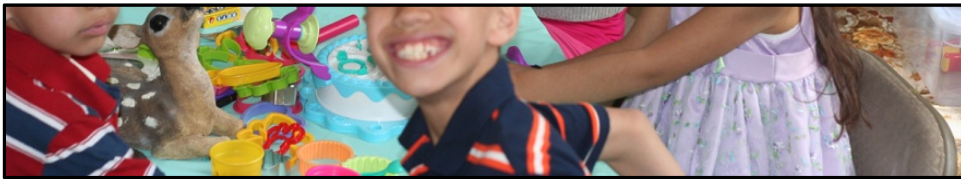
My mom noticed right away when she came here that the fruits and vegetables were huge here and lasted a long time in the fridge. In Mexico they are small and don't last so long—flavorless. My uncle from my mom's side, he grows his own stuff.

### **Interpersonal Influences**

Although individuals are the bearers of cultural heritage, as described above, this section focuses on individual persons who influence students' interest in and access to particular foods. In some cases, these individuals expand the students' culinary repertoire by teaching them how to cook certain dishes (or in some cases, withholding sharing their expertise), and sometimes entice them to eat new or unfamiliar foods. Interpersonal influences identified by the students include those of individual family members (especially parents and grandparents), peers, and others (e.g., neighbors, family friends, teachers, and school staff). Franco summed up his perspective on the multiple levels of individual influences on his daily food practices, describing his mom as the main influence; friends as important influences, as they eat out together a lot and share meals at

each other's homes; and he also included the school cooks as influencers, noting that they decide what is offered for lunch.

It was apparent that students perceived individual family members, including extended family, and friends as the strongest interpersonal influences on their food practices. Santiago remarked, "The biggest influence is at home. We usually eat home-cooked meals. We don't eat out much. We really like to eat together as a family." The students' photographs and stories provided glimpses into many scenes, from the joy of little cousins to the process of frying a whole fish (see Figures 29-30).



*Figure 29:* "Even though family should be together, it is quite a tradition for us. We don't have all our family here. We always met at my grandparents' house on my mom's side, because that's where it all started. It's really nice to see my cousins and my sister, all of us eating together and laughing together and enjoying those moments with your family." (Miguel)

All of the food memory essays written by the students focused on their families, sometimes including neighbors and family friends. Vicente photographed and described preparation of a particular celebratory meal, when his grandmother was coming to visit from Mexico.



*Figure 30:* “The actual fish is frying [in the *disco*] —all the bubbles. Usually family reunions are when someone is coming down from Mexico” (Vicente).

Vicente described cooking whole *mojarra*, a type of fish:

We fry the fish and then we cut little triangular tortillas and fry those as well. We put onions, *jalapeños*, garlic—we fry all that too. I like family reunions because we talk with the family and feel love from family members. It’s a good experience.

Lucia reflected on learning to make *menudo* from her grandfather, before he passed away:

Grandpa would describe *menudo* as ‘the glue of the family’. . . . Some way, somehow this chewy cow stomach kept us close together for generations. My grandpa on my dad’s side was from Mexico. [He] wanted me to carry on the tradition of *menudo* on Christmas day. The first time we made it, I was like 4. I remember helping him clean it. When I was like 10, I could make it by myself



(don't make it any more). Because my grandpa passed away 2 years ago, my family just stopped (making *menudo*) and my grandma doesn't like how it smells when it cooks. No one else in my family likes it. I eat it at restaurants.

Several students described food memories specifically associated with their grandmothers, keepers of the traditional food practices of their families.

When I was growing up, my Nana would make a soup from acorn. She would pick acorns, grind them up, and pick the shells out. This process took the longest. Once she had the corn base taken care of, she then would make dumplings. All together the stew would consist of dumplings, "stew meat," and the acorn. The soup has a very bitter taste. It's something I had to get used to, just like coffee. Whenever I think of the soup, it reminds me of my Nana, sitting by the fire making bread on a rainy day. Yes, that's possible—acorn soup as a comfort food, mostly eaten on cold, rainy days. (Shasta)

Lucia reflected on the way that her grandmother shared special time with individual family members: "Every Thursday, we're at my grandma's house. My grandma set's up days so each kid has their own set day. I go every Thursday with one of my uncles. She always makes Spanish rice for me." Vicente summed up family influence: "It all has to start at home. Whatever you do at home is what you get used to and what you start liking."

**Peer influence.** High schools students are in the process of growing into an independent phase of their lives. Peer influence is generally bi-directional, and is an example of reciprocal causation (Bandura, 2001), where individuals act both as influencers and influenced. Results of prior research have been mixed, with some finding

that peers are the strongest interpersonal influence on adolescent food practices (Perry, Kelder, & Komro, 1993), and others suggesting the need for further study (Story, Neumark-Sztainer, & French, 2002). My research with this small sample of New Mexico students suggests that family may exert a more important influence on food practices than that of peers.

I often eat what I want to eat, but I can say that I am often influenced by my family . . . extended family. . . and friends. If I am invited to a friend's house for dinner, I will eat the food that their parents have prepared. (John)



*Figure 31:* Lunch at school. (Emily)

“At my friends’ house I could resort to eating junk.” John

“When I’m with my friends we’re usually more tempted to go out and get something to eat instead as opposed to stay at a house and cook. ‘Cause we’re lazy. When you cook you have to wash dishes.” (Shasta)



*Figure 32: Cleaning up. (Miguel)*

Although the students shared no photographs depicting cooking with friends, several students talked about doing these activities together. Franco said, “My best friend taught me to make sushi, which is really, really cool.”

### **Gendered Roles**

Food practices were gendered in the narratives of students. Enactment of traditional gender roles, with women primarily responsible for household food, and men valued as professional chefs or in charge of the grill, was the reported norm in the majority of the students’ families (see Figures 29-31). Several quotations from the students illustrate this accepted attitude and practice: “Usually all the women in the family—the men don’t cook at all—it’s still the same way, at least in my family” (Miguel). “My brother and my dad— they don’t touch the kitchen—they think cooking is too complicated. My dad can’t even warm up a tortilla” (Candelaria). “My mom has always cooked—she spoiled us that way” (Vicente).



*Figure 33: Who is in the kitchen? (Miguel)*

However, there were two reported exceptions to women holding sway in the kitchen. These included a single dad, who cooked with and for his children, and a retired father, who was the primary cook in the family. He made dinner every night, making sure that it was on the table after his wife had come home and had a few minutes to put her feet up and relax before dinner.

Grocery shopping was described as most often done by mothers in students' families. However, there were variations, including one student who shopped for food for herself each week, several whose parents shop together as a team, and two who reported that the entire family shops together. Sofia said, "When we go grocery shopping, we go out as a family. My dad's not here."

Especially among students who were of Mexican descent, students reported that their mothers almost exclusively cooked in the home. The notable exception described

was *carne asada* (barbecued or grilled meat), with outdoor cooking the domain of men in many cultures (see Figures 37-38). The allure of fire!



*Figure 34:* “The picture shows a very big sense of my culture . . . how in my culture we make *carne asada* during special occasions, family reunions” (Santiago).

In my culture, Hispanic culture, when there’s [*sic*] people who come over to the house who aren’t usually around, we usually have a barbeque; we call it a *parrillada* [mixed grill] in Spanish. In our culture the man’s job is to set the coal, get the grill, heat up the grill, then cook the meat on the grill. (Santiago)

Thanks to these *carne asadas*, or barbecues, our family keeps in touch and be a close loving family, for these *carne asadas* don’t only bring food, they bring smiles, laughter, and jokes. Happiness is what sits around the table where we eat *chuletas* and *costillitas*. (Santiago)

Miguel reiterated the pattern: “The men don’t cook ever in my family. It just depends on what they’re making. My grandpa and my uncle take care of the *carne asada*.” Santiago explained:

Once you start growing up—12, 13, 14—you start hanging out more outside with the guys. They teach you how to set up the coal on, how to start it up, put the spices on the meat, then they teach you when it's done, how to grill it.



*Figure 35:* “To start the grill, we get wood, and then we get a can and cut it, put olive oil in the can, put the can right in the middle” (Santiago).

Santiago continued the directions for lighting and cooking on the grill:

Roll up a napkin and put one end in it. Then stack the pieces of wood (chip the wood)—set up like a teepee around the can, make sure that the air will flow through it. The napkin will start on fire and getting bigger and bigger, then you stack the coal around it. Then you have to wait until the coal gets white—not fire any more. Then you put the grill on top of it. To clean it, you get an onion, cut it in half, and rub it against the grill. I don’t know if everyone does that, but it’s what we do—the family. If you ask me why you do that, I’ll say, “my parents have done it forever.”

Shasta and Santaigo concurred: “Usually the elders, like the women, cook.

Sometimes they’ll force the little kids [to be around the fire]. Men do—like—the grilling

of the meat,” Shasta said. And according to Santiago, “While the guys do the cooking on the grill. . . The girls begin the chopping. They cut the jalapeños, tomatoes, onions, and avocado to make the *salsa roja* and *guacamole*.”

Not all families fit the stereotypical roles described above. Several students described variations in the roles of their parents in the kitchen. Franco described his father as the primary family cook:

My mom really doesn’t cook—she bakes cakes sometimes. Mostly my dad cooks—that’s because he’s retired. He likes to have dinner on the table a few minutes after (she comes home) so she has some time to relax. He gets creative—he tries different things. . . . My father’s mother taught him to cook. He got a lot of influences from her. They [father’s parents] were from New Mexico—further up north.

Shared cooking roles were also detailed:

Monday is my dad’s day off—and in a way it’s my mom’s day off. So my dad cooks. For breakfast, he made us an omelet with weenies. Weenies had onion, tomato, and jalapeno. And kind of like a smoothie: *liquado*, milk, chocolate milk, and a banana. (Santiago)

Notably, with the exception of two boys, most of the students didn’t appear to view own cooking practices with overt gender bias. This result was contrary to formative research with a similar population in which boys, more frequently than girls, talked about how their parents didn’t let them cook, supporting prior research that Hispanic boys are much less likely to cook at home compared to girls (Chuang & Tamis-LeMonda, 2009; Evans et al., 2011).

Several boys in this study were determined to cook for themselves at college. Lucas stated, “Me and my mom went to (the college) and saw Big Wall of Ramen. That’s why I want to learn how to cook—so I could go get some vegetables and do something simple for myself.”

Finally, the photographs revealed differences in types of food that may be attributed to gender. Formative research with a similar population found that girls reported eating more fruits and vegetables than boys, who expressed more interest in eating meat. Although in this study written and recorded data did not reveal that girls ate more fruits and vegetables than the boys, gender appeared to be a distinguishing factor in the number and types of foods that girls and boys photographed, with the girls’ images containing greater variety of foods and more fresh produce than the boys’ photographs (see Appendix D).

### **Economic Factors: Food Cost, Hunger, Waste, and Sharing**

Although none of the students documented the cost of foods that they photographed, most seemed aware of the variability of food cost, depending on where it was purchased. The issues of hunger, waste, and sharing were also addressed (see Figures 36-40). At least half of the students mentioned that cooking<sup>5</sup> one’s own food is a way to save money, echoing research by Gaines, Robb, Knol, & Sickler (2014). David observed: “Healthy food is pretty expensive. If you want anything from Whole Foods it’s pricey.” In contrast, Lucas said of his family’s food purchasing practices, “Mostly we buy organic and really fresh. Only if we have to go somewhere fast, we’ll go to Walmart, but that’s only in case of emergencies.”

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<sup>5</sup> “Cooking” may be considered a contested term, as the students described multiple activities as cooking, from butchering a cow, to preparing food “from scratch,” to heating up packaged foods.



Time can also be considered a cost, and exemplifies the sense of the dependence (particularly for those with limited cooking skills) on foods that are fast, cheap, and easy (Nestle, 2002). “We make soups—canned soups—stuff that you can make fast. Since we’re going to be college students, being able to make something with ease is important.” (Franco)

The following quotations express several of the students' experiences, attitudes, and expectations related to the economic and practical value of cooking.

“Being able to cook is a very big advantage, because you’re not too dependent on too many other people or things to eat” (Franco).

My friends—everyone can cook a little bit. It’s just a basic need. ‘Cause if you can’t cook, what are your options? Eat out—and that takes a lot of money. It’s a life skill. It’s a good thing to know—you can save money. I guess you can kind of explore cooking—you can mix things and they can kind of turn out good or bad. (David)

Another student, Shasta, talked about preparing to leave home, and learning budgeting skills: “Well . . . ‘cause my aunt’s trying to get me prepared to leave the house next year, I have a budget [each] week to buy groceries and cook for myself, so I usually go to Albertsons.”

Hunger and food insecurity is a prevalent reality in the life of many students in New Mexico, but may not be disclosed unless deemed necessary. When several students candidly discussed the food insecurity issues that their families sometimes faced, none of the other students appeared surprised. John addressed the impact on his family in these terms:

Our food stamps were shut down the past month, and so I have just been eating very little, less and less—school lunch has been my main meal. We had some dried beans, but I didn't want to bother with—I have been eating very little, but it seems like I always have enough to eat to get by.

Isabella talked about how her mom sometimes has soup nights because they don't have enough money to buy something more. She said, "Obviously we're not broke because we still have our house, but it's like the deadline of our budget, and she [mom] says, 'We're having ramen tonight.' That's when you know we're at our limit." John continued, "Sometimes it's just us fending for ourselves (or with my mom), digging through the cabinets. There's some canned food, ramen noodles."

Purchasing in bulk is another way to shop economically and save money. Especially when cooking for a crowd, big-box stores offer economical food choices. In addition to store promotions and sales, discounts on cases of foods may make purchasing large amounts of food an attractive, cost-saving option.



*Figure 36: Beans. (Shasta)*



*Figure 37: Potatoes. (Shasta)*



*Figure 38:* “It was Easter and then there was a wedding and then there was a traditional coming-of-age-ceremony. When a ceremony like that happens the whole family camps out for like a week or so, and so you have to cook for everyone ‘cause you’re not going to drive home” (Shasta).

Placing value on leftovers connotes an awareness of economy and reluctance to waste, as shown and described below. Such practices may have evolved due to periods of food scarcity, but they also represent values of reasonable frugality, and respect and generosity toward others, as illustrated by Candelaria’s and Miguel’s photos and narratives:



*Figure 39:* “After everything has been served, it was a little bit of leftovers that my mom had in one of the pots where we made the chicken fajitas. We don’t throw food away, ‘cause we think it’s not right” (Candelaria).



*Figure 40:* “This is my grandpa—he was at his neighbor’s house. She’s really close to us. There was a veteran that was living in the house and he passed away a few years ago, and he seemed like family to us. And we would visit him every day. My grandma made would make a dish for them, and send it every day. . . . My grandpa is still taking care of the house. I wish that I could give back like that too.” (Miguel)

Miguel talked proudly of his grandmother’s generosity:

The most special [thing] about our food culture is my grandma sharing food with the neighbors—because it comes from the heart of my grandma. I would just deliver it—every night. For me that’s just a great example of giving.

### **Commercial Influence**

Commercial influence, especially the rise of corporate control of the global food system, has been indicted as the main cause of obesity and associated chronic disease, as society has succumbed to the persuasive power of food advertising and appears now to be at the mercy of corporate food giants (Nestle, 2002). Over the course of the project, students reflected on the commercial influence of food marketing. Their observations ranged from the allure of shiny apples to the heavy marketing of manufactured foods, from breakfast cereal to fast food to sodas. Beginning with a statement about the influence of visual appeal, David stated, “If I go to a store, I’m going to choose which apple looks better, not knowing where it’s grown.”

Girls discussed in a focus group how parents have their children’s best interests at heart, while food marketers don’t care if youth become overweight or unhealthy, but are only focused on their bottom line. The boys concurred, but added that fast food doesn’t assuage hunger, and that it might only satisfy for an hour. The following images and statements portray some of the students’ perspectives on the commercial influence of food processing and marketing (see Figures 41-46).

Media have been ascribed with powerful influence over youth (Stevenson, et al., 2007), which a number of students acknowledged as part of their lives. Shasta shared her perception of the power of television: “Because if you see someone eating on TV, you want to eat that. If you see someone eating in a restaurant, that’s not [as influential].”

Foods produced and packaged with the allure of heat, salt, and fat are sold with flaming success. In their narratives, many of the students expressed their awareness of the health impact of regularly consuming, or overconsuming, processed foods. Candelaria referred to the appeal of processed snacks:

When we go to Walmart, I want chips—I try. I still like to eat [them], but I know how to control myself. At Whole Foods, my mom usually buys soup there—breads maybe. At Walmart you get only the same bread—all white.



*Figure 41:* “Hot Cheetos and Taquis are my favorite snacks.” (Emily)



*Figure 42: Sugar in the morning.*<sup>6</sup> (Emily)

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<sup>6</sup> Captions not in quotes were written by the author.





*Figure 43: Sugar at lunch. (Arturo)*



*Figure 44: At supper time. (Arturo)*



*Figure 45: Blake's Lotaburger. (Miguel)*



*Figure 46: "We left Dallas at 5:30 in the morning and stopped to eat about 11" (Santiago).*

Manufactured foods, especially soft drinks, have, in many cases, become customary accompaniments even to traditional meals. The number and variety of (mostly) sweetened beverages and soft drinks that appeared in students' photographs was quite astonishing. Below is a detailed list of beverages photographed by the students (see Appendix D for this list as photographed by gender): bottled water (3), bottled water dispenser in kitchen, vitamin water, chocolate fat free milk, milk (lowfat), half & half, Silk chocolate soy milk, Starbucks coffee drink, café o lait (homemade), iced tea, McDonalds large cup (3), green tea (bags), whey protein powder, orange juice, Capri Sun, Hawaiian Punch, Coke, Wild Cherry Pepsi, Mug Root Beer, Zuko fruit drinks, diet soda, MAX 0, Dr. Pepper, Strawberry Fiesta diet Sunkist, Dr Pepper (2), Sundrop Mountain dew, Sierra mist, Sprite Dr Thunder, Coke, Sonic Mix, and Bud Light beer. Although it is beyond the scope of this project to delve deeply into the impact of drinking sugared beverages, a number of researchers have observed that if there was one consumption behavior to change to support health it would be to stop drinking sugared beverages (Nestle, 2006; Schlosser, 2001).



*Figure 47: Soft drinks. (Emily)*

In addition to the soft drinks, pictured above, Emily talked about a favorite homemade sweetened beverage:

I love my brother's tea. He makes the best sweet tea ever. He puts peach or sometimes red raspberry and heats it the coffee machine, then adds sugar. For a big jug it's almost 2 cups of sugar. If you've ever been to the south [you know] it's (the tea) amazing!

Lastly, the influence of advertising on alcohol consumption was not directly addressed by the students, but several photos illustrated its place in their homes (See Figures 48-49).



*Figure 48:* “This is my oldest uncle. This picture is like an oxymoron, because he’s the only one in my family who doesn’t drink” (Lucia).



*Figure 49:* Liquor cabinet (Miguel).

## Perceived Health Outcomes

All of the students acknowledged the role that food practices play in their health, with those whose families had been affected by diabetes expressing most awareness and concern, and influences on food practices (see Figures 50-54). Candelaria was candid about the shock of learning that she might develop diabetes:

I wanted to play basketball and I had to have a physical, and they told me that I was pre-diabetic... My food practices have changed a lot—in 7<sup>th</sup> grade I was pre-diabetic for a year and my family had to change everything from what I was drinking to what I was eating. They had to change everything because my mom was also pre-diabetic. We used to have a lot of junk food—Tampiko juices—I could drink a gallon by myself in a day. We used to eat just sweet bread and chips. Besides being a lot healthier, I feel much better, my self-esteem. I was 230 pounds and I was only 12. It was like a life-changing experience. (Candelaria)



*Figure 50: Water instead. (David)*

Students reported that health issues often impacted the food practices of extended family members.

My grandma on my mom's side has diabetes. My mom decided she was going to grow old soon and didn't want to be like that. We all feel more energized, more awake. It's kind of weird like the whole diet at my house changed completely. My mom lost like 40 pounds and my dad lost like 20 pounds. It's weird here in the pictures I'm showing fruits (see Figure 4), instead of eating a huge, heavy dinner like we used to. (Lucas)

Although he didn't disclose a particular health issue, Vicente spoke from a perspective of behavior change:

A couple months ago I would eat at fast food restaurants, but now I'm trying to eat healthy, and so usually I get the healthiest food at home so that's what I try and eat. . . . For breakfast, my mom gives me a bunch of vitamins—some special oil and some alfalfa. She gives me a shake with protein and milk. I take that in the morning 'cause it's the quickest.

Even those students who didn't reveal a particular personal or familial health issue expressed that they understood that what they eat affects health and wanted to practice healthy food behaviors. Franco observed:

My dad has always been conscious of what we eat—since he makes dinner a lot, he likes to have pretty good food, not bad for us. I kind of picked it up from there and learned a little more on my own—what foods help.

In his interview a year after the food project was conducted, Lucas reported on his family’s eating habits (see Figure 11): “We don’t eat [*pan dulce*] that much anymore. We only eat it if friends come over.”

Fruit was cited as an example of a healthy sweet food by a number of students.



*Figure 51:* “This is one of my little cousins. He loves pineapple” (Candelaria).



*Figure 52:* “My friend holding an orange—she peeled it in one giant peel. I guess I’m not that healthy—‘cause I was at her house and I don’t eat fruits and things like that” (David).



Several boys specifically noted that they did not like fruit and/or that their families did not often buy fruit. This was in contrast to others whose families purchased and ate fruit on a regular basis, sometimes displaying it in the kitchen or dining room (see Figure 53). David observed:

Fruit isn't just laying around my house. Some people have bowls of fruit. We don't really have that. . . . No one in my family is that big on fruit. Occasionally we have bananas, but they'll just sit there and get brown.



*Figure 53: Dining room fruit display. (Miguel)*

There was also evidence that awareness of health promoting foods such as fruits and vegetables are being integrated into food practices, alongside of ubiquitous processed foods. Due to the global food system, there is increased access to fruits and vegetables year-round, with varied practices of inclusion in daily meals and celebratory events.



*Figure 54: Asparagus and pot of red chile. (Emily)*

Several students mentioned traditional healing practices in their families. One example that stood out is described below:

This is kind of gross, but there are these little maggots (you put in milk), *búlgaros*, and you take out the juice and make a smoothie—good for diabetes, cure cancer, and helps us with detox. They smell really gross, they smell like vomit. Then you strain out the bulgaros and drink the milk. You make a smoothie with fruit to make it taste OK. My grandma is doing that and her blood (sugar) levels went down. My grandma got inspired because my mom is so into it [eating healthy]. (Lucas)

**Good food versus healthy food.** Many of the students expressed conflicted feelings about healthy eating, articulating that tasty (good) food and healthy food are at different ends of the spectrum of enjoyment. Vicente described his perspective:

The biggest barrier is that usually the best food isn't the healthiest. Like flavor-wise. I can go home and eat a quesadilla with chicken inside and that's much unhealthier than going home and eating a salad with chicken on top of it. Usually the food that tastes best is unhealthier—greasier.

He continued, seeming to want to like eating healthier food: "Healthy can taste good. My mom makes a big plate of salad with chicken on the side or ham, with a little bit of dressing. It's good—it's not bad, it's healthy."

Lucas expressed his conflicted feelings related to the traditional foods of his culture:

The hard thing to deal with is our culture—our traditions: *menudo, posole, tacos* – they're not that healthy. Sometimes people from our culture want to go out to dinner—sometimes it's hard—it happens with me too when I'm with friends. You feel guilty, [but] at the same time I'm eating all that stuff.

Acculturation studies (Pérez-Escamilla, 2009; Ayala, Baquero, & Klinger, 2008; Ungar, 2012) have indicated that American dietary habits have a negative impact on Latino/a immigrants, especially contributing to increased rates of overweight and obesity and associated chronic disease. However, given the rising rates of the same problems in Mexico and Latin America, might increased access to a variety of foods (including fresh fruits, vegetables, and whole grains) exert positive pressure to enact healthy food practices?

Not unlike the majority of the U.S. population, students expressed confusion about what they believe they "should" eat, what they want to eat, and what various types of foods represent. Emily stated:

I feel like if I were out from underneath them [parents], then I would probably obviously would make my own choices and would probably kick in some of the sweeter stuff than what they're taking. I do think that it is important to have a healthier diet because it's better for you. So I guess when I'm on my own I probably will stay to eating some healthier foods – but not all the time, like I probably won't stick to that every single time. Like junk food, because I can.

### **Other Influences**

Although a pilot study found multiple influences from neighbors and community members, as well as school classes, student participants in this project reported few of these types of influences on their food practices. Among these, the influence of teachers was cited. John observed that his high school health teacher had recommended coconut oil for cooking. Vicente and Candelaria recalled that they participated in a cooking program in elementary school. Although that program provides cooking classes only once every four to five weeks, alternating with simple fruit and vegetable tasting lessons, Candelaria's memory was that:

We cooked twice a week—and we made healthy stuff like pasta from scratch—and I took it in the summer as well and extended it . . . . My mom came and volunteered a few times. Usually she was in charge of a little group. She liked it.

### **Chapter Summary**

Six main categories of influences on food practices, as perceived by the student participants, were presented in this chapter: 1) family and cultural heritage, 2) interpersonal influence of family and peers; 3) gender roles; 4) economic factors; 5) commercial influence; and 6) perceived health outcomes. Within these categories,

meaningful associations and interlinked influences were drawn by participants. In these associations, family and cultural traditions were valued positively in all cases. Family and culture were inextricably intertwined with the interpersonal influence of relatives and peers as primary influences, emerging as more important influences on attitudes towards food, especially those family and culturally-based food practices. Gendered roles still hold sway in students' parents and, particularly, grandparents' generations, but appear to have shifted significantly to a more egalitarian model among high school students.

In contrast to the major influence of family and cultural heritage on students' attitudes and expressed values, economic factors appeared to exert a powerful influence on daily food practices. Students recognized that commercial forces are ubiquitous and seductive. Economic factors and commercial influence were linked, as students observed that the environment supports the fast, cheap, and easy foods marketed by multinational food corporations that have been shown to have detrimental effects on consumer health.

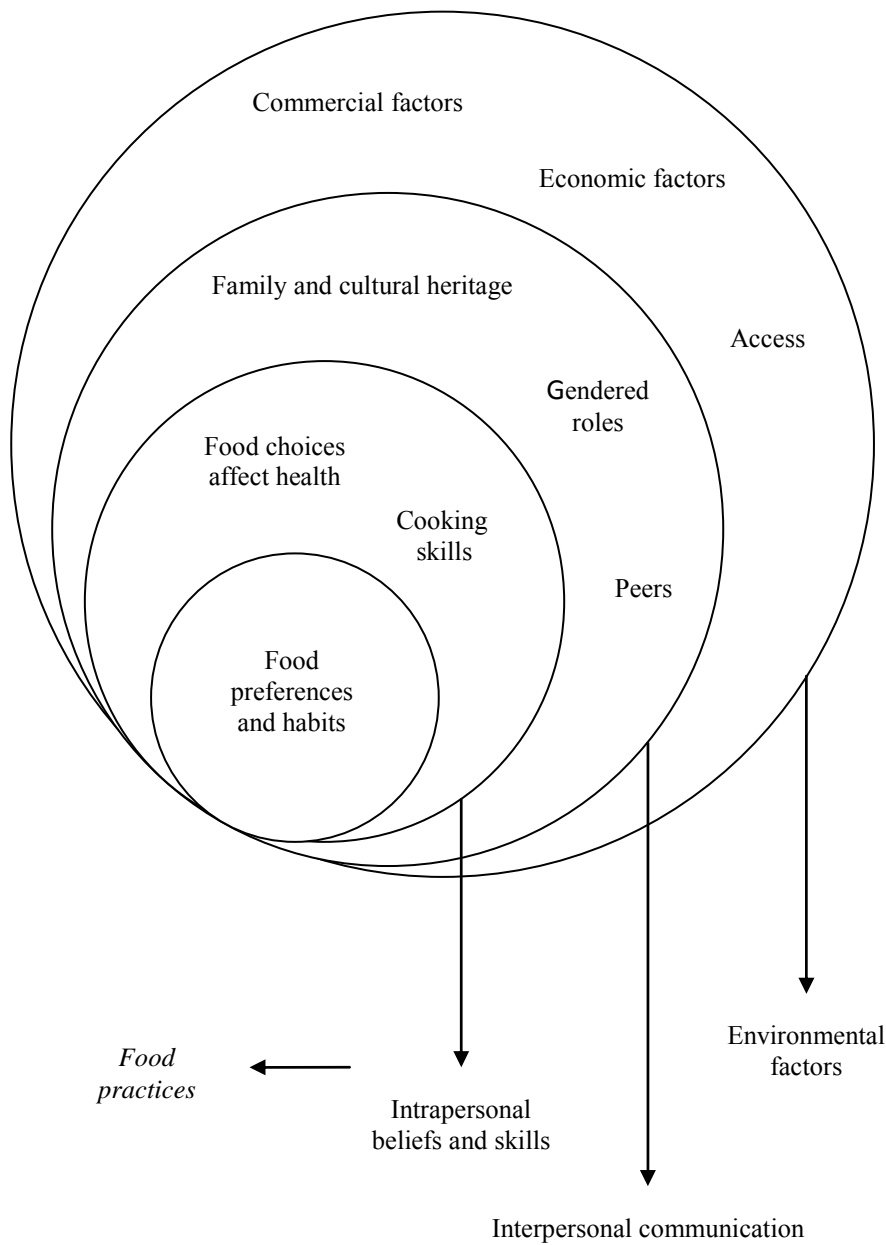
In addition, gendered roles were revealed in discussions of family influence, and most often described in traditional terms, with mothers and grandmothers doing the bulk of cooking for their families, with notable exceptions, and evolving cross-role behavior. However, all of the students, with the exception of one boy, appeared to view themselves as capable of and interested in cooking to some extent, as they associated cooking with self-reliance, economic advantage, food choice (including food preferences based on taste and cultural heritage, and perceived impact on health), and enjoyable social interaction with friends and family.

Contento's (2011) model of social and environmental factors that influence food choices and dietary behaviors informs these findings. The overlapping influences of

environmental and interpersonal communication were found to affect food practices: personal influence appeared to determine and sustain beliefs, norms, attitudes, and the learning and practice of cooking skills; societal and environmental influences, including commercial media and advertising, were reported to markedly affect daily food practices. These overlapping influences, coupled with sensory-affective factors and economic means, leave open the question of how different individuals learn and discern the impact of their food choices, as they prioritize resources and strategize to meet their daily nutritional needs.

In order to illustrate the six main categories of influence on food practices that emerged as salient to this population, I suggest an adaptation of Contento's (2011) model of intrapersonal (including learned), interpersonal, and environmental factors that influence food practices (see Figure 55).

**Figure 55: Adapted Model of Influences on High School Students' Food Practices**



The associations among the six main categories of influence, described and illustrated above, led to four themes of interest explicated in the next chapter.

## **CHAPTER 5: FINDINGS**

### **THE VALUE OF PERCEIVED INFLUENCES**

In Chapter 4, I discussed six spheres of influences that the high school student participants perceived on their food practices. This chapter addresses RQ 2, that is, the value attributed by students to: a. family and cultural heritage, b. interpersonal communication, and c. the practice of cooking. Although this research was not designed to influence participants' food practices, the effects of participating in the research project were reported by some of the students and are discussed at the end of the chapter.

In the identification of influences, students made meaningful associations and value judgments that led to the recurrence of four themes of interest explicated in this chapter: 1) family and cultural heritage imbue positive value to food practices; 2) students are aware of the friction between cultural traditions and daily food practices; 3) cooking is perceived as a means of honoring family and ensuring continuity of cultural and family traditions; and 4) cooking is an attribute of self-reliance which may increase food access and promote and support health.

The majority of the data discussed in this chapter were generated in student essays, including food memory essays and those that addressed one of the following writing prompts: 1) What does your photograph show about the connection between food and family and/or food and culture? 2) Describe how your photograph illustrates or interprets facilitators (that which makes something easy) and/or barriers to cooking.

#### **Family and Cultural Heritage Imbue Positive Value to Food Practices**

In this study, the students repeatedly expressed how much they valued their family relations and cultural traditions. Families transmit their influence through



repetition and reinforcement of their “social *location*” and, in many cases, as influential conductors of “cultural *certification*” (Katz & Lazarsfeld, p. 115). Although sometimes these stories were tinged with inevitable sadness of disappointments, joy and pride were the most frequent expressed emotions.

Many of the student participants’ descriptions of the influences on their food practices in this study exemplify and illustrate the concept of *cultural resilience* (Ungar, 2012), a complex “ecological understanding of resilience . . . in reciprocal person–environment interactions” (p. 14). All of the students conveyed that the personal influence of family members, especially parents and grandparents, imbued their food practices. Most expressed a common desire to preserve family and cultural traditions, including maintaining a connection with their heritage through traditional food practices that were personally shared by family members. This finding was particularly pronounced among the Latino/a students. Many of the students shared stories of how their parents or grandparents taught them how to make particular dishes; how their families modeled various food practices; and especially how love and affection was expressed through family interactions around food. Isabella observed that “life lessons about food” included “learning manners and etiquette.”

The warmth of family and food was a recurring theme expressed by most of the students. Vicente said, “It’s grandma’s pinch of seasoning that establishes all the happiness and joy of the family and food time.” Similarly, Shasta stated:

Food is meant to be enjoyed. My family enjoys food. They enjoy raising cattle, planting corn, making food, and shopping for food. My mother likes to go to the farmers market every Saturday to get our weekly veggies. Food is what brings my

family closer together.

Vicente observed, “It’s not the *Caldo de Rez*, the *Pico de Gallo*, the corn tortillas, the rice or the seasoning; it’s the presence of the people around you that really make the dish worth the time.” Shasta, Lucas, and Santiago echoed these sentiments:

Food has always been a way to connect with my family. Talking in the kitchen, talking at the dinner table, or going shopping for food. Food is the glue to my family. My mother always makes us eat meals at the table. She gets very upset if I eat in the living room or in my room. Tradition is that we: cook together, eat together, and clean up together. (Shasta).

When we visit my mother’s hometown in Chihuahua we always make “*queso fundido*.” We visit a local lady who makes “*queso asadero*” every morning and the smell is amazing. Later that night we cut the cheese and add the *chorizo* and we let it melt in the chimney grill. The aroma of the cheese and *chorizo* [and chile] is simply amazing. This has become a family tradition to buy *asadero* the first day we’re in town. All my family from my mother’s side gets together and talk of all the stories we have missed throughout the year. (Lucas)

The whole family sits around and enjoys these extraordinary tasting foods [*menudo* and *tamales*], talking about the kids and how the family in Mexico is doing, or the latest news in the family. We all say jokes and laugh. These foods bring joy and great memories to me. (Santiago)

Sofia softly reminisced about the gentle relaxation of family time (see Figure 56):

[It’s] sunny and warm outside, when my mom has just finished watering the garden. After all the work of cleaning the patio is the time to rest on the front

porch, drinking coca-cola and eating sunflower seeds. We are having a nice family conversation about our future . . . thinking back of my and my parents' childhoods . . . The smell of wet dirt out in the breeze.



*Figure 56: “Peace time” (Sofia).*

### **The Friction between Traditional and Daily Food Practices**

Most of the students articulated their awareness of the friction, and sometimes struggle, between traditional and daily food practices, as defined within the frame of the levels of influence identified in the socio-ecological model. Contento (2011) addressed and acknowledged the dissonance created as multiple, conflicting pressures are applied from institutional, community, systems and policy levels upon home food practices which are situated at the individual and interpersonal levels of the socio-ecological model. This theme is illustrated by the ubiquitous ease of acquiring a dollar meal, often by oneself, which stands in stark contrast to rich culinary traditions that are grounded in

relationships with others, and require forethought, time, skill, and effort.

Although all of the students expressed an awareness of this issue, the Latino/a students described it most vividly. Candelaria remarked on the requirements of enacting her family's cooking traditions, especially those of holidays: "It's always hard to do this food because there are specific things and steps you have to have and do, if you want it to come out perfect." Franco observed:

The differences are that, as I explained in my daily food practice paper, I often eat easy and convenient meals that can be prepared fast so I can hurry and eat and then get back to whatever I happened to be doing. This goes for school lunch as well as dinner sometimes. . . . Today's food revolves around convenience, where food as a child was always something that we could all take our time with.

As Schlosser (2001, 2012) documented, commercial pressures have seduced the public into falling for the fast, cheap, and easy choice (Nestle, 2002). Franco's observation reproduces this view: "People have evolved into creatures that search for the most convenience possible."

This includes eating anywhere and everywhere (see Figures 57-58). Clearly articulating the various pressures between levels of SEM, Santiago described the tension between the influences of the environment and traditional family food practices:

At home my parents [are the influence], because they cook [the food], but I think society has a lot to do with it. Because at school, we don't like the food in the cafeteria, what should we eat? McDonalds or this place or that place. So it's a social kind of thing [making those choices].

In focus group discussions, students talked about how their friends often suggested going to McDonald's, and so they end up eating fast food. The boys, in particular, focused on getting food that was cheap. Lucas summed it up: "Because since we're young and some of us don't have jobs—we don't really get that much money either—so we just go to something that's pretty cheap, which is most of the time something awful."



*Figure 57: Multitasking (David).*

Franco described his lunch in his car at school, stating that, in addition to the packaged snacks, his lunch was:

An easily thrown together meal . . . not very traditional in any way. . . . without access to a stove, pan, or any cooking appliances I am required to eat something fast and convenient. I picked my burrito because burritos are delicious and—I made the burrito—it's homemade.

He continued:

There is a relationship between the meal photographed in this picture and today's culture, which in some cases is entirely based on whatever is most convenient—not historical culture, but modern generic culture that is common among most of today's teens. When referring to historical culture this meal is probably the furthest thing from it. (Franco)



*Figure 58:* “The first barrier to cooking . . . is just the fact that I am eating in my vehicle” (Franco).

Nevertheless, restaurants may also serve as a proxy for cultural reenactment, providing the comfort of familiar flavors and foods, as this quotation from Isabella suggests:

Saturday night dinner was full of laughs and cheers; it was my cousin's birthday. We all went to Maria's for a delicious Hispanic dinner. Our conversations consisted of great stories from the past and plans for our future . . . talking about coming down for fiestas and all the parades and food!

Finally—lest dessert be forgotten, bakeries provide endless varieties of cakes and sweets for celebrations, as well as to fill every craving (see Figure 59).



*Figure 59: The last piece of cake (Arturo).*

### **Cooking Honors and Supports Continuity of Cultural and Family Traditions**

Although multiple factors impact a healthy diet: food access, food preferences, and culture, having the skills and interest to prepare food may be one that is within our control—cooking skills may be passed down through family practices, learned in school, discovered out in the world as a young adult, or found as a means of healing during a health crisis. In a world where prepared and packaged food is available on most street corners, such skills may be derided and their worth diminished, but the individual who has a sharp knife and knows how to use it to prepare delicious food has power—power to nurture, to create nourishing food from whatever is at hand.

This section examines the role and value of cooking as a way to perpetuate and ensure continuity of cultural and family traditions through cooking. *As tradition keepers*

(Bowen & Devine, 2011), many of the students expressed respect for the food practices of their elders, as well as the desire to preserve their cultural and family heritage through learning how to cook and share traditional foods (see Figures 60-63).

Candelaria stated: “My Mexican-American culture brings so many different feelings, and so much passion, into your heart.” Shasta pointed out, below, that food practices have multiple dimensions:

A community will come together and make sure that their families are fed—and make sacrifices. ‘Cause it’s really hard to cook at an open fire. Elders do it for family. I just feel like cooking isn’t just about eating, it’s about the process of getting the ingredients and then cooking it, whether it’s a vigorous process or putting something in the microwave.



*Figure 60:* “That’s cooking outside. I thought that was important [to photograph]—‘cause different cultures use different ways of cooking depending on location and materials” (Shasta).



John also associated cooking with feelings of gratitude and love:

[When you cook]—you appreciate the meal a lot more, the time and effort you put into it. I guess that’s where the phrase, cooking with love, comes from.

Usually when your parent makes something for you—like a sandwich my mom made for me—it tastes better.

In addition to expressing pride in their family cooking, many of the students discussed their interest in learning and practicing these food practices, especially to carry on food traditions by learning from family members how to cook particular dishes. Although there are vast stores of cooking advice, videos, and apps available electronically, the direct acquisition of cooking knowledge and skills has traditionally been transmitted through family and community practices, schools, and professional apprenticeships. Learning to cook involves observation, engaging in rudimentary food preparation tasks (especially cutting/chopping), experience with the effects of heat, food combinations, and seasoning. Those fortunate to have a teacher may receive critical feedback. It works best when those charged with teaching cooking engage budding cooks with generosity, strictness, kindness, and delight.

Most students talked about making simple dishes with their families. Candelaria expressed appreciation for the fact that her mother has taught her how to cook:

She has influenced me to learn how to cook the food that my grandma taught her to learn when she was my age . . . Cooking with my mom, it makes me learn how to cook, and how to keep my culture together in my house.

Whether making a complicated or simple dish, cooking can bring closeness. Lucia said, “Last night [my mom] asked me to help her make mashed potatoes. My mom boiled

them, then I mashed them, put in butter and mayo and salt and pepper. She just tells me what to put in and I do it.” She continued, “I love cooking, especially with my family!”



*Figure 61:* “When my mom is there cooking, teaching me how to cook, [it] is a blessing. I sit back and think of when she’s gone, and I won’t have her next to me. When she’s gone it won’t bring her laugh to me, or the way she would yell at me to bring the cheese” (Candelaria).



*Figure 62:* “We all sit down and get to eat—after everyone had pitched in and done a little work, so everyone has a share in what we do. So we all sit down and all enjoy a nice family meal. Food has a lot to do with bringing us together” (Santiago).



*Figure 63:* “My grandma usually makes *posole* or *menudo*, as they call it. It’s a popular food/dish. Out of all of them that I had from restaurants and other places, I don’t like them, I like my grandma’s taste better. I don’t know, but maybe it’s that I’m used to my grandma’s cooking” (Miguel).

*Menudo* held a special place of honor for Lucia and Miguel, who hope to carry on making this traditional food: “Being the oldest grandchild, I feel like it’s my responsibility to make sure the tradition [of making *menudo*] stays alive” (Lucia).

I love the smell of the *menudo*, especially the texture of every bite. My grandma is the only one in the family who makes *menudo*. Anyone else who tries to make *menudo* never tastes the same. My family eats *menudo* at anytime of the day. My family will even eat *menudo* for breakfast, lunch, and dinner. Hopefully one day I will learn how to make *menudo* to keep the tradition alive in the family. (Miguel)

Santiago stated proudly that he liked sharing his family’s food practices, “so that other people can see your culture and how your family works and how you eat and what you do with special foods.” Candelaria eloquently expressed the value of food traditions:

We are united because we continue our traditions, and are learning from others.

I've developed love for the traditions I have in front of me. I plan to share these traditions with other people and my own children in the future.

In contrast, several students observed that their grandmothers didn't want to share their cooking secrets. Lucia said, "My grandma does the cooking. She likes to keep her recipes to herself. She doesn't trust us." Miguel wrote about learning to make *menudo*, titling the piece, "No grandma, I won't ruin it." He wrote, "Hopefully one day I will learn how to make *menudo* to keep the tradition alive in the family." He observed, "My grandma is the one in the family who makes *menudo*. Sometimes my grandpa helps her, but she really doesn't like it when others help because she thinks it will ruin the recipe and the process [of] how to do it." Although the students did not explain their understanding of why their grandparents would not want to share their secrets, I surmise that there are a number of plausible reasons that might explain this behavior. The grandparents may value their quiet time alone in the kitchen, may not have the skills and/or patience to share their secrets, or may just want to control the cooking so that their dishes are "perfect" for their families. The reasons may never be known, but regardless, the grandchildren have learned to appreciate these family secrets.

### **The Value of Cooking Skills**

This section examines and articulates findings that cooking skills, in addition to carrying on traditional food practices, are valued because they may facilitate food choices, have economic benefits, increase self reliance and food access, and support health. At the most basic level, the students observed that cooking is a life skill that allows and supports food choice in an economically viable manner. Many of the students

voiced their understanding of the role of cooking in the context of family life. A prime example is the coming of age transition for boys from helping in the kitchen with their moms to working beside the men in the family to grill meat. In addition, a number of students expressed their understanding that cooking is one way to take care of oneself, empowering students in making healthy food choices, including how cooking supports independence and choice.

A primary interest of this project was to investigate how cooking may positively impact health. Over the past 20 years, interest in cooking as a practice that can influence healthy food choices has increased, with Marion Nestle (2002) and Michael Pollan (2009) both touting cooking as a vital means to healthy eating. However, *how* we successfully learn to cook so that it becomes a regular practice that supports health has not been well addressed. Cooking schools generally either serve the restaurant industry or the gourmet dilettante, and an expectation to learn to cook at home can no longer be taken for granted. However, among the participants in this study, with the exception of one boy, having some skill in cooking was viewed as desirable, was understood as a means of making choices, and appeared to be seen as a step towards independence.

**Cooking as an aspect of self-reliance.** Cooking may range from making toast to creating a four-course meal. Most of the cooking reported by students during the project was relatively simple, with the exception of the traditional dishes that students photographed and described. Several boys expressed satisfaction in their accomplishment of making various breakfast foods—often eaten at any time of day (see Figures 64-66).



*Figure 64:* “This shows a family working together to make a meal—me and my sisters (even though I’m not in the picture). You don’t see that too often—it’s not frozen food that’s heated up. We actually cooked breakfast” (John).



*Figure 65:* “My sisters and I cooked the meal. These photos show a direct connection between food and family because this is breakfast at home. . . made from scratch without a ton of unknown additives” (John).

John remarked, “I think she [my sister] definitely prefers (cooking) over chores or homework.”

A number of the students discussed how they have learned to cook for themselves, and sometimes with and for family and friends. David and Shasta shared a few of their experiences:

I was at a friend’s house, and we decided to make breakfast. We went to Walmart to get what we needed. We came back to the house with tortillas, eggs, bacon, potatoes, green chile, and cheese. I shredded the cheese and potatoes while he [my friend] cooked the eggs and bacon. The green chile was the last and most important ingredient to the burritos. . . Those were two of the best burritos I’ve ever eaten. (David)



*Figure 66: Bacon (Shasta).*

I go shopping and try to make a lot of it and freeze it and warm it up for the rest of the week ‘cause I don’t have time to be cooking every night. So I have just been making soup ‘cause it’s easy and fast—chicken soup, chicken curry, beef curry. (Shasta)

John described how his family food practices had changed as he grew up and became more self-reliant:

We still eat Shepherd’s Pie, but now I can make my own food, which I often do. I also live in a completely different place. Back then I was always off playing while my mom made dinner. I never really thought about it as something that takes effort. Sometimes I’ll go off on my own and make my own food, other times we will all eat together.



More than half of the students talked about cooking as an aspect of their coming independence as they anticipated going away to college or leaving home to work.

Santiago remarked:

It's definitely going to be a hard time not having home-cooked meals that I grew up with. I'll definitely try to cook for myself. I know how to cook for myself. I actually cooked for my parents on Saturday. I made them chicken breasts stuffed with spinach, cheese, and ham, and it was all rolled with ham and had a chipotle sauce on top—with white rice. I just decided to cook for them [not a special occasion]. They really enjoyed it.

Lucas stated: "I've always been interested in helping my mom cook. When I go to college next year, I don't want to be shopping at McDonalds. I want to buy my own food and cook it" (Lucas). Lucia concurred:

I know I'm not going to have money—I'll be a broke college kid. Probably (will cook) Spanish food—like rice and beans, potatoes, and meat—cheap good stuff. My best friend doesn't know how to cook. Her [*sic*] and her boyfriend go out to eat every day. I need to cook—I'm not that good, pretty slow so it's edible. But I like cooking because I was raised around cooking.

If one has basic foods, a sharp knife, a few pots and pans, running water, and a heat source, much is possible. For example, cooking eggs was repeatedly photographed, written about, and discussed by students during the project (see Figure 67). Eggs are



*Figure 67: Sunny side up (David).*

inexpensive, contain protein, can be cooked fast or slow, prepared scrambled, sunny side up, over easy, poached, boiled, made into an omelet or frittata, or used as the main ingredient in a soufflé or angel food cake, etc. Eggs may be combined with potatoes, often derided by health pundits from various quarters, or other vegetables, to make a satisfying meal.

Awareness of the need for self-reliance was a repeated theme, as the students were planning to emerge from their families into lives as adults, with new responsibilities to take care of their own food needs. I suggest that the students' articulated valuing of self-reliance and the economic benefits of cooking may affect their sense of food security. The knowledge and skills to cook expands opportunities to make nourishing and tasty food with limited resources, and thus has the potential of increasing food quality. These practices may then serve as facilitators of healthy eating behavior.

**Cooking as a facilitator of health.** How can having the skills, interest, and means to prepare food counterbalance commercial practices of culinary imperialism? Cooking may be one factor that may prove to reverse recent trends of malnutrition and obesity occurring at the highest rates among high poverty and low education population groups (Drewnowski & Specter, 2004). Several students expressed that cooking was a way to control what they ate, as they knew what was in the food. Many traditional foods include beans, meat, grains, and vegetables, which contain vital nutrients.

Lucas talked about his family's awareness of nutrition, along with the fusion of multiple cuisines.

Mexicans have many traditional plates, which is [why] my mom prefers to cook for us. My mother is always conscious of nutrition. Many vegetables are used in cooking. We eat many different types of foods like Alfredo pasta with a Mexican blend of chili or Spaghetti with spicy tomato sauce. An influential factor in the food is a fusion of my Mexican roots with the other cultures here in the U.S., like Italian American, and Asian foods.

Franco continued:

I like to be as healthy as I can. My body—I want it to run efficiently. Eating good foods helps your body in different ways. Instead of just eating just a ton of sugar [which] goes to your fat cells.

Lucas observed that some children of chefs are obese, as “their parents are always cooking for them.” This topic led to a reflection on self-control, which was echoed in Candelaria's interview, as she discussed her food preferences and changes that she had accomplished after discovering that she was pre-diabetic.

Most students reported that they did some cooking at home, often helping their mom or dad. Several boys said that the only food that they cooked was *carne asada*; one student cooked for herself daily. Half of the students stated their intention to cook for themselves in the coming year, both as an act of new independence and as a means of reducing food costs.

### **The Influence of Participating in this Food Project**

Although this project was not designed to change high school students' attitudes or behaviors, half of the students remarked that the project did have an effect on their food practices. One student reported being inspired to try new foods as a result of the food project; four students reported increased awareness of food practices that affected them; and one reported attitude change. The following are quotations from students' follow-up individual interviews:

I am honored to be part of the study. It changed me because it got me to pay attention closer to details than just saying oh, we just make this food and eat it. It changed me and gave me a different perspective from where my grandparents grew up and the culture and it made me think about those moments of delivering food to the neighbors. (Miguel)

I feel like it did [change my attitudes]. I would see my mom cook and I would see what she would put in. It did change because now I see my mom could and I ask her . Yes, I do [cook more now]—even if something small like stir the rice. I help her more ... I feel like I am going to cook for myself because it is healthier. You eat McDonalds for a whole week you feel sick. (Candelaria)

It's been over a year, so we've gotten used to it [eating healthier]. It was around the same time that we did the food project. It's awesome, you feel energized, you feel better about yourself ... At my home there's no more Coke or any kind of soda. It's mostly water and during the summer a lot of fruit juices – watermelon, mango, and other kinds of water that my mom makes. Our food contains more vegetables now and fruits. (Lucas)

It kind of inspired me to go out and try different foods, like cultural foods. A few of us went to someone's house and we ate *posole*, which I had never tried it before. I used to be scared to try new foods, so it kind of opened my [feelings] about variety of foods. (Shasta)

Although Sofia stated that the food project did not really have an effect, she observed, “It made me think that food is something important in life. If we don't have food we can get sick, get really ill, and have consequences in the future. Food is something that we really need.” Shasta concluded, “I didn't realize (before) how much of my life has to do with food and planting food and feeding things so you could get food.”

These accounts by participants suggest that there is unrealized potential to affect attitude and behavior change by engaging high school students in observational practices and discussion about the positive value of cooking and importance of awareness of the impact of food practice choices.

### **Chapter Summary**

As a result of the identification of influences on their food practices, students made meaningful associations and value judgments that led to the recurrence of four themes of interest explicated in this chapter: 1) cultural heritage of family imbues

positive value to food practices; 2) students are aware of the friction between cultural traditions and daily food practices; 3) cooking is perceived as a means of honoring family and ensuring continuity of cultural and family traditions; and 4) cooking is an attribute of self-reliance which may increase food access and facilitate health. These findings are positioned within SEM, with particular emphases on intrapersonal, person-related (interpersonal), and social and environmental influences, as shown in Contento's (2011) model.

Family and cultural heritage were strongly valued, supporting Weisner's (2002) finding that the cultural pathways of everyday life are most often enacted within the family. In addition, the students proudly showed in their photographs, wrote about, and discussed the importance of their cultural heritage in their own food practices.

Most of the students appeared to want to learn and practice cooking traditional family foods, thus valuing and in some cases enacting the roles of *tradition keepers* (Bowen & Devine, 2011). This finding is contrary to some acculturation studies (Ungar, 2012).

The students' nonchalant awareness of the friction between cultural traditions of their families and their daily food practices is, perhaps, evidence of their acceptance of the environment of contradictory messages where high school students reside. They are exhorted to work hard, excel, and be healthy, while being bombarded with commercial messages selling the quick fix of fast, cheap, and easy food, drink, and pleasure (Nestle, 2002). Although the students appeared to be keenly aware of the persuasive influence of commercial food marketing, their consumption of fast food as part of daily food practices appeared to be most strongly influenced by real and perceived time limitations and economic means (World Health Organization, 2009).

Many of the students expressed an understanding that cooking is an attribute of self-reliance, which I suggest may be a factor in decreasing food insecurity and thus, effectively increasing food access and facilitating health. This point is elaborated on in the discussion that follows in Chapter 6.

Chapter 5 concluded with the unexpected finding that half of the students reported that the study's food project influenced their attitudes about and towards food and, in a few cases, influenced their food practices. In other words, the communication process of participating in the food project increased the students' knowledge and perspectives related to their own and their classmates' food practices, caused them to question, and thus may have influenced their thinking about their own food practices.

## CHAPTER 6: DISCUSSION AND CONCLUSIONS

### Project Summary

In light of recent trends in food practices that have led to unhealthy dietary habits, this research aimed to contribute to the understanding of the interplay between food, culture, and communication in order to inform health communication research, nutrition education interventions, and public policy strategies to promote healthy eating behavior among young people. This qualitative study was an in-depth exploration of how 14 New Mexico high school students perceived the factors influencing their food practices, with a particular focus on the roles of interpersonal communication and cooking. Two main research questions guided the project. First, what do New Mexico high school students identify as the main influences on their food practices? Second, among the students' perceived influences on their food practices, what is the value attributed to: family and cultural influences; interpersonal communication; and the practice of cooking?

The research is grounded in health communication theory, with the socio-ecological model (SEM) as a main framework, and personal influence theory in communication studies. Using data collection methods of photo-elicitation, photovoice, focus groups, individual interviews, observation, and self-reflective writing by students, I collected 753 digital photographs made by students as records of their food practices, 38 student essays—including food memory free writes and photo-elicitation essays—transcripts of two focus groups, class discussions, and 12 individual interviews, and field notes. Data analysis was conducted using grounded theory procedures for coding and analysis (Charmaz, 2006; Cho & Lee, 2014).



Chapters 4 and 5 presented the findings from the study. Chapter 4 detailed the students' perceived influences on their food practices. Six major spheres of influence were identified: family and cultural heritage; interpersonal influences of family and peers; gendered roles; economic factors; commercial influence; and perceived health outcomes. Chapter 5 addressed the value that students placed on family and cultural influences, interpersonal communication, and cooking. Four themes emerged from data: cultural heritage of family imbues value to food practices; students' awareness of friction between cultural traditions and daily food practices; cooking as honoring family and ensuring continuity of cultural and family heritage and traditions; and cooking as an attribute of self-reliance that may increase food access and facilitate health.

The findings suggest several theoretical insights and questions for further research. First, contrary to some research that suggests that media and peer pressure are the strongest influences on high school students' food practices (Drewnowski & Specter, 2004; Nestle, 2002), the role of family influence on high school students' food practices may, in fact, be primary. Second, young people are interested in practicing self-reliance through cooking. Third, students showed awareness that cooking is an aspect of food access. This study adds to health communication research by rearticulating the value of interpersonal and socio-cultural influences on high school students' food practices, and suggesting future directions for relevant research and practice, as elaborated in the next section of this chapter.

### **Reflection and Rearticulation**

This section describes the three theses that provide a framework to interpret the findings in light of the broader purposes of the project: to investigate high school

students' perceptions of influences, specifically culture and communication, on their food practices; understand food practices that may facilitate decreases in morbidity and mortality; and inform health communication/nutrition education interventions and public policy strategies to promote healthy eating behavior. Each of the following theses reflects on and rearticulates the influences and relationships between and among people related to their food practices.

### **Family: Stronger than Fast Food**

The circle of family, including extended family and close friends, emerged as the primary influence on high school students' food practices in the study. In other words, influence transmitted through “social *location*” (status or connection within a group influenced by context or situation), confirmed by “cultural *certification*” (the right to influence conferred by culture), forms the core of identity and the basis of food practices (Katz & Lazarsfeld, 2006, p. 115). This finding is contrary to some prior research that has found media and peer pressure to exert the strongest influences on high school students' food practices (Drewnowski & Specter, 2004; Nestle, 2002). Family food practices are enacted through repeated modeling, which is one factor that leads to development of food preferences and dietary habits. The interpersonal influence of family exemplifies the ties of human connection that serve as carriers of cultural heritage, including food practices.

One could argue that attributes associated with the Latino/a population, represented by the majority of the participants in this study, influenced the findings of this research. It has been suggested that those coming from more relationally based, or collectivist, cultures would more highly value the cultural heritage of their families than those rooted in cultures that more highly value individualism (Ayala, Baquero, &

Klinger, 2008; Bowen & Devine, 2011). It was also evident in this study that those students with closest ties to agrarian practices revealed a reverence for place not expressed by the others. However, regardless of background, all of the students expressed respect and love for their families and cultural heritage, along with generally conflicted feelings that the food of one's own culture may not always be the most healthful.

### **Self-reliance: “Someone Has to Cook My Food”**

My mentor told me long ago, “Someone has to cook my food; it might as well be me” (S. G. Kashyap, personal communication, 1995). Data from this study revealed that interest among young people in practicing self-reliance through cooking their own food may be underrated. As discussed in Chapter 5, most of the student participants reported valuing cooking skills as an aspect of self-care, reinforcing findings that young adults who participated in hands-on food preparation education as adolescents had better dietary quality than non-participants (Laska, Larson, Neumark-Sztainer, and Story, 2011).

Furthermore, student participants in the current study expressed an understanding of the connection between economics and health, and expressed a desire to preserve their cultural and family heritage through knowing how to cook their family's traditional foods. Rather than viewing cooking as enslavement, the students appeared to value the freedom that learning and practicing cooking skills promise (Lang and Caraher, 2001).

### **Food Security: Cooking as an Aspect of Food Access**

I suggest that, in light of the fact that food acquisition and food preparation skills show potential to increase food security (Gaines, Robb, Knol, & Sickler, 2014), cooking is an aspect of food access. Cooking skills may be a factor in increasing motivation and interest in purchase and use of fresh foods, as well as in reducing household food waste.

Knowing how to cook vastly increases the possibilities for food choice and food quality when practiced regularly, as the knowledge and skills to cook increases opportunities to make nourishing and tasty food with limited resources. I theorize that this may be due to interest in acquiring a variety of foods (whether by growing, shopping, or otherwise receiving), and increased cooking self-efficacy. These skills may also support increased appreciation, use, and consumption of a wide variety of fresh foods, as well as reduce household food waste. All may serve as facilitators of healthy eating behavior.

The assertion that cooking is an aspect of food access does nothing to deny the devastating effects of poverty, food deserts, famine, and corporate greed. When there are few resources and no grocery stores or convenience stores that stock only processed foods, chips and coke may be the *de facto* meal. When there is no food, cooking cannot save any one from hunger and starvation. But a cook may have an eye for food that another may not see—colors, shapes, perhaps even edible weeds. In New Mexico, *quelites* (lamb’s quarters) are a delicious spring green available only to those who can see and identify these tender wild greens and know how to cook them. In the desert, a cook may see the potential of the nourishment that magenta prickly pear fruits and *nopalitos* offer, where another may see only cactus spines as sharp thorns.

### **The Foodscape of the Future**

It is up to this generation and the next to support a food system that promotes and provides health-promoting foods to all people, whether through growing fruits and vegetables in their own backyards or in community gardens, shopping at farmers’ markets, and/or reducing food waste by through education, prevention, redistribution, and repurposing of fresh fruits and vegetables that have formerly been consigned to landfills

(Pansing, et al., 2013). Current and future generations must heed the warnings that predict dire social, environmental, and economic consequences if the populace continues to unconsciously wander down the current path of reliance on nutrient-deficient, manufactured pseudofoods that are a significant contributor to the escalating health costs (and human suffering) of obesity and associated chronic disease that may soon outpace the billions that Americans spend on fast food (Schlosser, 2012; Simon, 2006). If not, corporations will continue their stranglehold on the food system, purchasing and processing foods with the addictive appeal of sugar, salt, and fat that enamors consumers and holds them in their thrall, degrading the health and wellbeing of communities (Adams & Geuens, 2007; Nestle, 2002).

### **Advancing Theory: Integrated Socio-sensory Ecological Model**

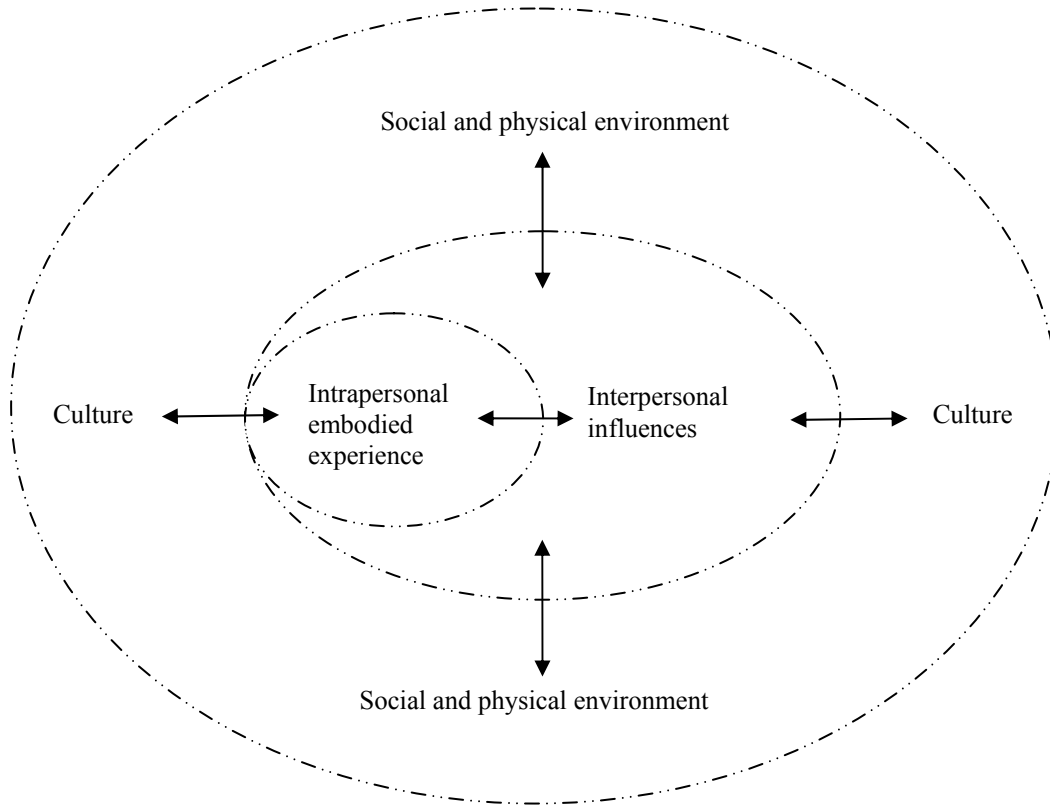
The findings of the current study are framed by SEM and illuminated by personal influence theory. Attributes of SEM as a context for this study are discussed in this section, along with suggestions to advance the theory. SEM provides a clear means of examining and articulating the multiple levels of influence on health. Addressing macro-level influences provides a valuable perspective in the arenas of public health, community planning, and the development and implementation of educational programming. I support this view and suggest that, instead of taking a critical standpoint that SEM overlooks the possibility of discontinuity between levels (Richard, Gauvin, & Raine, 2011), one might view the divisions between levels of SEM as selectively permeable, similar to cell membranes. This perspective advances SEM to a dynamic model which exhibits the advantage of bi-directional, and perhaps multi-directional, energy exchange inherent in the systems of all living organisms.

However, viewed from the perspective of the individual, SEM level of policy and social systems may not appear to exert a substantially different influence from that of the organizational and community environment. Student perceptions of the influences on their food practices aligned with Contento's (2011, p. 37) SEM model (See Figure 2), which presents three levels of social and environmental factors: the individual (intrapersonal), the interpersonal, and an outer layer that represents all external social and environmental determinants.

The above finding, particularly in light of examined and expressed influences on the arena of food practices, suggests another view of SEM. The proposed integrated socio-sensory ecological model (see Figure 68) applies social and sensory influences to health communication, and may be used as a tool of perspective from which individuals and families might view the influences on their own food practice behaviors.

The embodied experience of the senses links the body and brain, informing intellect and intelligence, and attitudes and beliefs about food are no exception. Touching, smelling, seeing, hearing, and tasting are the means through which children first learn about themselves and their environment. Interwoven with emotional connections and physical need, these sensory-affective experiences largely determine likes and dislikes of different foods. As experience grows, context is expanded. The proposed model gives room to consider a question: Might we be better off trusting the natural instincts and intelligence of the young to make good food choices rather than providing an environment of conflict and confusion?

**Figure 68: Integrated Socio-sensory Ecological Model**



### **Making a Case for Cooking**

This project contributes to health communication literature, with application to research and practice in the areas of food systems and food justice by increasing understanding of communicative practices that influence food practices among youth. The study examines, confirms, and rearticulates the value of interpersonal and cultural influences on high school students' food practices which may inform public health and education policies and practices in order to create and support a healthier future for the next generation.

Advocacy and education to increase healthful food practices may effectively be transmitted through multiple channels. I suggest that emphasis be placed on education

and empowerment of youth and families, with a focus on practice of cooking skills as a means of sustaining and increasing healthful food practices, including learning how to safely use and sharpen knives, and to observe and understand the power of heat—how various levels and types of heat transform food. Although media may provide an infinite variety of food images, cooking shows, and product inducements, I would argue that there is no substitute for practice to learn and reinforce skills.

### **Limitations**

This study shares limitations common to most qualitative research in that the results are not generalizable. A second limitation is that the researcher's interest in cooking may have spurred socially desirable responses from the students, and/or there may have been a participant-observer influence on individual students and classroom dynamics. During the student focus groups, it is possible that participants may have experienced peer pressure that influenced participant discussion (Krueger, 2000). In addition, in an effort to reduce influence on the students, the term “cooking” was not formally defined. Finally, the timing of the initial data collection occurred during the week of Easter, which may have increased the emphasis on culturally-based food practices and family meals.

### **Recommendations and Implications for Further Research and Practice**

This study provided an examination of the perspectives of high school students on the influences on their food practices, and opened up a number of areas for further study in health communication research and practice, particularly how food access and cooking practices are situated in the discourse of eating behavior and health.



Recommendations for future research include further investigation into high school students' food practices in the context of pedagogy. Such research might take several perspectives: 1) interpersonal communication approach: investigate the role of interpersonal communication as a facilitator of cooking practices as a means of practicing healthy behavior; 2) educational practice approach: if cooking may indeed facilitate healthy eating behavior, further investigation into how to teach and disseminate cooking skills is warranted; and 3) intercultural approach: investigate the role of cooking as a means of crossing cultural divides that isolate and disempower individuals and communities, whether through race, ethnicity, poverty, and/or immigration status—this approach would focus on honoring the traditional food practices of all people, with the aim of increasing understanding between peoples.

As evidence mounts that physical, social, and emotional health are intertwined, I suggest that pedagogical strategies that privilege experiential methods, rather than seat time, be considered to strengthen learning and achievement among children and youth. However, as test score outcomes put increasing pressure on schools, there is a tendency to develop and implement quick and easy programs that take little time from the school day. Although the food project intensive for this research was not designed as a health promotion intervention, it revealed promising areas for health promotion program exploration, design, and implementation. I would recommend that, in order to engage students in learning about and practicing health-promoting behaviors, constructivist learning principles be woven throughout the curriculum, easily aligned with language arts standards, and perhaps integrated into science and history classes. I further suggest that, in addition to using methods of self-expression such as photovoice and photo-elicitation,

hands-on lessons with real food be used to engage and empower students. Working with food provides opportunities for learning and sharing that can be met in no other way. I suggest that students empowered with food preparation skills will find their own ways to make their family's authentic dishes, either following traditional steps or adapting to current tastes, trends, and the evolving food environment, and in the process, value and validate the culinary traditions of their cultural heritage.

Furthermore, food provides a means to advance intercultural communication and dialogue. Flatbreads across the world may be made from different grains, but they are all flatbreads. We all eat—every day if we're lucky. Food itself tells the stories of people, and many treasure memories of a favorite grandmother's dish, perhaps made with aromatic herbs from the garden or juicy, ripe fruit from the backyard or a neighbor's tree. Culinary traditions have evolved based on the plants and animals that thrived in distinct climatic conditions. Varied cuisines not only nourish, but through their vast differences and surprising similarities can act as a means of connecting people and creating shared understanding. I suggest that by embedding discourse on food and food practices, from personal perspectives expanding outward to community, regional, national, and world food practices, there are untapped opportunities to develop and nurture curiosity, empathy, understanding, and compassion, and increase pro-social bonding among people from diverse cultural traditions.

Public policy has the potential to further educational research and practice, as described above, that positively influences health education and behavior and facilitates intercultural understanding. This research suggests consideration of public policy measures that validate and support student-centered learning across school systems,

recurring funding for food and nutrition education, and free school meals for all students. This last recommendation would make a significant step to alleviate hunger, reduce obesity and health disparities, and democratize the food system, at least during the school day.

### **Final Thoughts**

Results from this research may support efforts to engage and empower youth in understanding and valuing their own and others' cultural food traditions, as well as spur educational initiatives that support and reinforce learning the skills to access, prepare, eat, and enjoy a variety of delicious foods as part of healthy and fulfilled lives. Understanding factors that support healthy food practices is critical. Although the health costs of obesity and chronic disease were not the main thrust of this study and these issues were not specifically raised with the students, I would argue that if young people do not have opportunities to develop preferences for healthy foods, including learning and practicing cooking skills that will allow them to have power over their food choices, we face an increasing prevalence of nutrition-related morbidity and mortality in society.

Although a number of pundits now exhort the American public to "Just Cook," there remains a controversy about whether cooking is necessary or advisable in a world of plentiful manufactured foods, which calls into question the value of cooking education. There are those who have never stopped cooking, from necessity, scarcity, and/or habit, as well as those who have newly discovered cooking and may tout it as a skill to celebrate independence, use all of the senses, and perhaps support local agriculture. I disagree with none of these, but suggest that delving deeper into the individual's

experience within the context of the role of food in human survival and evolution is warranted.

This study illuminated the complexity of influences around food practices as understood by young people. Participating students were poised to graduate from high school, with many about to go out on their own for the first time. They articulated and appreciated many aspects of food, including the positive emotions generated when eating with good friends and family. They will emerge from their families into a society that is challenged and burdened by the paradox of food excess and hunger, but that still carries diverse and rich traditions that value delicious, nourishing food. These students and their peers will determine the direction that we take in the production, processing, distribution, and consumption of food, whether we continue down a path of the commodification and desecration of our planet's riches or reawaken a joyful responsibility for the nourishment of all by learning about and practicing food skills.

Furthermore, although most youth seem to have received the message that it is important to eat vegetables rather than candy, chips, or other highly processed foods, access within the food environment, cooking skills (or lack thereof), and food preferences appear to be one of the strongest predictors of food choice in the United States. Is cooking a quaint activity from the past that society devalues and is determined to forget?

I have been surprised to notice that rutabagas are still found in the produce aisle. Who cooks rutabagas (also known as swede)? Who has even seen a rutabaga? Or, more to the point—who cares? If people continue to buy rutabagas, farmers will continue to grow them, and grocery stores will stock them. If no one knows what a rutabaga is, or appreciates how they taste, they will disappear from the marketplace.

I believe that it is important to examine and question the unintended consequences of current food practices. In this age, with food on every corner, have we traded, in the name of convenience and speed, the fragrances and flavors of spring onions and fresh peas for frozen and fast food products? Respecting and cultivating traditional food practices is one way to preserve culture, and sometimes food traditions may be all that remains of culture—providing solace, nourishment, and continuity of identity.

It is well known that food brings people together—for daily meals, for blessings and celebrations. In the case of this study, we didn't have real food, but talked happily about a celebration with food. The student participants were most generous with their work and their words, kindly sharing their family stories. Perhaps they were an extraordinary group of students, supported by caring teachers, or perhaps they were warmed by the topic, proud of their cultural heritages, thus inspired to share their stories of food around the virtual fire.

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## APPENDIX A

### Food Project Schedule

#### Day 1

Introduction and Overview of Food Project Activities

- Read chapter from “A Taco Testimony” by Denise Chavez
- Write 3 essays
- Document: Photograph and log all food practices for 5 days
- Conduct and record one interview with a family member about food and cooking OR interview a student in the class on the same topic

**In-class reflection:** Write one to three paragraphs that describe a food memory. The memory might be of a family food tradition or a food tradition from a culture that you identify with, or of something about food that a friend or family member shared with you or taught you about food.

**Homework:** Read “Salad Memories” chapter from “A Taco Testimony” by Denise Chavez (pp. 101-103).

**Note:** All food project essays will be included in the pastiche of writings to be turned in for this 11<sup>th</sup> grade American Literature class.

#### Day 2

Discuss Chapter from “A Taco Testimony”

**In-class essay:** Expand on the food memory writing that you wrote yesterday. Write one to three two pages on the computer - remember to include an introduction, descriptive body, and conclusion.

#### Camera demonstration and use of photo logs

**Major Assignment:** Beginning right now, photograph and log all food practices for 5 days that illustrate:

- Where you eat
- What you eat
- Who you are with when you eat
- Where the food came from
- Who prepared/cooked the food or how it was made
- What was the cost of the food

### **Day 3**

Bring cameras to class with at least 20 photos, download images into folders, and trouble shoot.

**Homework:** Document all food practices, as described above, using the photo log to detail each photo. At the end of the four-day weekend, you should have at least 95 photographs.

### **Day 4**

Download photos into folders on classroom computers

Turn in camera if finished or determine if needed to use during upcoming interviews

**In class essay:** What did you learn from documenting your food practices for 5 days?

**Homework:** Choose one photograph to use as the basis for a two-page essay using one of the following writing prompts:

1. What does your photograph show about the connection between food and family and/or food and culture?
2. Describe how your photograph illustrates or interprets facilitators (that which makes something easy) and/or barriers to cooking.

### **Day 5**

**Class Activity:** Brainstorm a list of 3 interview questions

Determine who will conduct interviews outside of class and who will interview another student in class. Remember to that you and interviewees must fill out Interview Consent Forms for any person not in this class

**Homework:** Conduct one interview (20-30 minutes)

### **Day 6**

Conduct in-class interviews; download audio files

If you conducted an out-of-class interview, download audio file

### **Turn in Camera**

**Homework:** Final project essay: Compare and contrast the food memory that you wrote about with your daily food practices. What is the same, similar, or different? Who and what influences what you eat every day?

### **Day 7**

Take Demographic Survey

Student Photo Presentation and Class Discussion

### **Day 8**

Focus Group 1

### **Day 9**

Focus Group 2

## APPENDIX B

### Student Focus Group Guide

Date of Focus Group: \_\_\_\_\_ Location: \_\_\_\_\_

Moderator: \_\_\_\_\_

#### Introduction

Introductory statement – Thank you for meeting with me today. The purpose of this group discussion is to talk about food and cooking. My name is Lynn Walters and I am a graduate student at the University of New Mexico.

Ground rules and explanations – A focus group is a discussion. There are no right or wrong answers, just opinions and ideas. I will ask that we speak one at a time, so that we can all hear what each other says. Please feel free to share both positive and negative comments. You don't have to direct all of your comments to me, you can talk to each other, as long as only one person speaks at a time. Remember that it's OK to disagree with what someone else says.

Because I am involved with the University and am collecting information from individuals, we have a letter that asks for you to agree to participate in the discussion today.

I want to tell you that I will keep everything that you say in this discussion confidential. That means that no one else will know what each of you said today. But it is OK to tell your family and friends about your general feelings and experiences with this session.

I am also audio-recording this session so that I can get all of your comments. Once I have transcribed the comments from the recording, I will remove all names. No names will ever be matched to any comments made. Only a summary report will be developed. After the transcription, analysis, and all written reports are completed, I will destroy the recording.

O.K., before we begin, does anyone have any questions about the consent letter or anything else?

#### **Turn on digital recorder recorder.**

1. What is one of your earliest memories about food?
2. What are some of your favorite foods and why?
3. Who cooks in your family? What does that look like?

4. What makes you interested in cooking or makes you not cook?
5. What foods do you eat at home?
6. What foods do you eat when you are not at home?
7. What is “good food” to you?
8. If “healthy” is brought up in previous response, or if it seems appropriate, follow up with: What do you think makes a food healthy?
9. What are some of the influences on what you eat?
10. Who does the grocery shopping in your family? Do you ever go? Do you have a say in what your family buys?
11. What effect did the food research project have on your attitudes and/or your practices (what you do) related to food and cooking?
12. What changes to the food research project would you recommend to improve the experience for other students?
13. We have talked a lot and you have shared some very useful information.  
Is there anything else you would like to add –or ask?
14. Thank you very much for your time! Your comments and ideas will help me understand how high school students think about food and cooking.

**Turn off recorder.**

## APPENDIX C

### Demographic Survey

Name: \_\_\_\_\_ School: \_\_\_\_\_ Date: \_\_\_\_\_

Please check the box that best answers each question.

1. What is your grade level?
  - 9<sup>th</sup>
  - 10<sup>th</sup>
  - 11<sup>th</sup>
  - 12<sup>th</sup>
  
2. What is your gender?
  - Female
  - Male
  
3. Which best identifies your racial/ethnic identity?
  - American Indian / Native American
  - Asian
  - Black / African American
  - Hispanic / Latino
  - White / Caucasian
  - Pacific Islander
  - Other
  
4. How often do you eat dinner with your family?
  - Rarely
  - Once a week
  - Two to three times a week
  - Most days
  - Every day
  
5. Who do you live with?
  - One parent
  - Two parents
  - Grandparents
  - Other
  
6. Do you have a part-time job during the school year?
  - Yes
  - No

Thank you very much!

**APPENDIX D**

**“What you eat” Table from Photographs**

Food Category	Male	Female
Raw (unprepared) foods	pineapple, melon, bananas (2), oranges (2), tangerines (2), avocado (2), apple, lime, jalapeño, whole fish, eggs (3), potatoes, cheese, ham, aged beef	cantaloupe (2), apple, oranges (2), banana, grapes, pineapple, strawberries, grapefruit, carrots, potatoes (3), onion, pecans in shell, chicken in package, flour, eggs, oil, olive oil, Activia light, sliced turkey breast, hot dogs, shredded cheese, syrup (pancake), sea salt, grated Parmesan, sunflower seeds in shell, Chinese takeout – glazed meat with rice, live cow, dry beans, coffee



Food Category	Male	Female
Cooked foods	spaghetti chocolate cupcakes capirotada (2) caldo de rez (2) red chile cole slaw scrambled eggs w/ ham & cheese fried egg with poptart hash browns bean burrito cookie peanut butter, jelly and oreo sandwich	pancakes on plate popcorn capirotada (2) eggs (2) w/ red chile (1) fajitas with Spanish rice Swiss chard (called Spinach) tortillas beans (3) hamburger with cheese, lettuce, onion, potato chips red velvet cake, cupcakes beautiful soup with potatoes, onion, cilantro lentils chicken, asparagus and mushrooms on plate asparagus (2) cooked in foil (1) steamed zucchini quesadilla popcorn roast turkey in bag mashed potatoes bacon homemade tortillas tortillas chile (2) roast ham hamburgers on buns with potato chips

Food Category	Male	Female
Packaged foods	tostitos ribs Twix Nutella Ice cream (2) canned foods packaged applesauce (individ) frozen shrimp sugar tortillas styrofoam takeout container Sun chips, tortilla chips oreos Skittles taco from fast food restaurant Captain Crunch cereal	tortilla chips (no lard) pasta sauce with meat frozen strawberries bread (3) taquitos light mayonnaise Ranch dressing, salad dressings Cherrios, puffed cereal, fruit loops green chile from bag hamburger buns Blue bird flour small shell pasta doughnuts mayonnaise (3) potato Chips hamburger buns (2) Crisco, soft spread veg oil
Condiments	Hot sauce mustard	Valentina Hot Sauce Chinese hot sauce Mustard Ketchup
Beverages	water chocolate Fat Free Milk, milk (lowfat) Starbucks coffee drink café o lait (homemade) McDonalds large cup green tea (bags) whey protein powder liquor (in cabinet) bottled water dispenser (kitchen) Capri Sun Hawaiian Punch Coke, Wild Cherry Pepsi Mug Root Beer	vitamin water bottled water (3) orange juice Silk chocolate soy milk half & half iced tea Zuko fruit drinks, diet soda, MAX 0, Dr. Pepper, Strawberry Fiesta diet Sunkist, Dr Pepper (2), Sundrop, Mountain dew, Sierra mist, Sprite, Dr Thunder, Coke, Sonic Mix Bud Light beer