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Exploring food choice as social practice
Appreciating the context of family feeding in Kahnawake, Québec, Canada

par

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Résumé

De nous jours, les modèles se référant aux comportements individuels représentent la pensée dominante pour comprendre les choix alimentaires dans le domaine de la nutrition en santé publique. Ces modèles conceptualisent les choix alimentaires comme un comportement de consommation décidé de façon rationnelle par des individus, en réponse aux multiples déterminants personnels et environnementaux. Même si ces modèles sont utiles pour décrire les déterminants des comportements individuels d'alimentation, ils ne peuvent expliquer les choix alimentaires en tant que processus social façonné en fonction des individus et des lieux, dans des contextes diversifiés.

Cette thèse élabore le Cadre Conceptuel sur la Pratique des Choix Alimentaires afin d'explorer les choix alimentaires comme phénomène social. En utilisant le concept de pratique sociale, les choix alimentaires des individus symbolisent une relation récursive entre la structure sociale et l'agence. Ce cadre conceptuel nous donne un moyen d'identifier les choix alimentaires comme des activités sociales modelées sur la vie de tous les jours et la constituant. Il offre des concepts pour identifier la manière dont les structures sociales renforcent les activités routinières menant aux choix alimentaires. La structure sociale est examinée en utilisant les règles et les ressources de Giddens et est opérationnalisée de la façon suivante : systèmes de significations partagées, normes sociales, ressources matérielles et ressources d'autorité qui permettent ou empêchent les choix alimentaires désirés.

Les résultats empiriques de deux études présentées dans cette thèse appuient la proposition que les choix alimentaires sont des pratiques sociales. La première étude examine les pratiques de choix alimentaires au sein des familles. Nous avons identifié les choix alimentaires comme cinq activités routinières distinctes intégrées dans la vie familiale de tous les jours à partir d'analyses réalisées sur les activités d'alimentation habituelles de 20 familles avec de jeunes enfants. Notre

seconde étude a élaboré les règles et les ressources des pratiques alimentaires à partir des familles de l'étude. Ensuite, nous avons analysé la façon dont les règles et les ressources pouvaient expliquer les pratiques de choix alimentaires qui sont renforcées ou limitées au sein des familles lors de la routine spécifique à la préparation des repas et de la collation. Les ressources matérielles et d'autorité suffisantes ont permis d'expliquer les pratiques de choix alimentaires qui étaient facilitées, alors que les défis pouvaient être compris comme etant reliés à des ressources limitées. Les règles pouvaient empêcher ou faciliter les pratiques de choix alimentaires par l'entremise de normes ou de significations associées à la préparation de repas.

Les données empiriques provenant de cette thèse appuient les choix alimentaires comme étant des activités routinières qui sont structurées socialement et qui caractérisent les familles. Selon la théorie de la structuration de Giddens, les pratiques routinières qui persistent dans le temps forment les institutions sociales. Ainsi, les pratiques routinières de choix alimentaires façonnent les styles d'habitudes alimentaires familiales et contribuent par ailleurs à la constitution des familles elles-mêmes. Cette compréhension identifie de nouvelles directions concernant la façon dont les choix alimentaires sont conceptualisés en santé publique. Les programmes de promotion de la santé destinés à améliorer la nutrition sont des stratégies clés pour prévenir les maladies chroniques et pour améliorer la santé populationnelle. Les choix alimentaires peuvent être abordés comme des activités partagées qui décrivent des groupes sociaux et qui sont socialement structurés par des règles et des ressources présentes dans les contextes de pratiques de choix alimentaires.

Mots clés : choix alimentaire, pratiques familiales d'alimentation, nutrition, santé publique, promotion de la santé, structure sociale-agence, pratiques sociales, routines, Giddens, contexte social.

Abstract

Models of individual-behaviour currently represent the dominant understanding of food choice in public health nutrition. This model frames food choice as a dietary intake behaviour rationally decided by individuals in response to multiple personal and environmental determinants. While useful in describing determinants of individual dietary behaviours, the model cannot explain food choice as a social process shaped in relation to people and places associated with diverse contexts.

This thesis presents the Food Choice Practice Framework to explore food choices as social phenomena. Using the concept of social practice, food choice is proposed as an interplay of social structure and agency. The framework provides a means for identifying food choices as activities patterned among, and constituting, day to day life. It furnishes concepts to identify how social structures reinforce routinized food choice activities. Social structure is examined using Giddens' notions of rules and resources and operationalized as: shared systems of meanings, social norms, material resources, and authoritative resources that enable or constrain desired food choices.

The empirical work from two studies supports the proposition that food choices are social practices. The first study in the thesis examines food choice practices in families. We identified food choices as five distinct routinized activities integrated among the usual feeding activities of 20 families with young children. The second study elaborated the rules and resources of food choice practices from the study families. We then analyzed how rules and resources could explain both enabled and constrained food choice practices experienced by families in the specific routine of creating regular meals and snacks.

Adequate allocative and authoritative resources helped explain enabled routine food choice practices, while challenges could be understood as coming about through limited resources. Rules could constrain or enable food choice practices through sanctioning norms and meanings associated with creating meals.

The empirical work supports understanding food choices as routinized activities that are socially structured and which characterize families. According to Giddens' structuration theory routinized practices that endure through time form social institutions. Therefore routinized food choice practices shape characteristic styles of eating patterns in families, as well as contribute to the constitution of families themselves. This understanding identifies new directions for the way food choice is conceptualized in public health. Health Promotion programs designed to improve nutrition are key strategies for the prevention of chronic disease and improvement of population health. Food choices can be approached as shared activities that describe social groups, and explained as socially structured by rules and resources present in the contexts of food choice practice.

Key words: food choice, family feeding practice, nutrition, public health, health promotion, social structure-agency, social practice, routines, Giddens, social context

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List of abbreviations

CAB   Community Advisory Board

CAHR   Community Alliance for Health Research

CIHR   Canadian Institutes of Health Research

CRE   Code of Research Ethics

KMHC   Kateri Memorial Hospital Center

KSCS   Kahnawake Shakotia'takehnhas Community Services

KSDPP   Kahnawake Schools Diabetes Prevention Project

KEC   Kahnawake Education Center

SCT   Social Cognitive Theory

Dedicated to Chico, Diego & Sofia

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INTRODUCTION

Understanding food and nutrition as social issues

Food is fascinating. It is undeniably central to many aspects of life. Food and its consumption are a significant part of elaborate life cycle celebrations, such as births, weddings, and the marking of anniversaries. In this way, food is a sacred element of our lives. Yet, we arguably dedicate the most time and effort to daily mundane food activities. Whether elaborate or mundane, food is recognized for creating and reinforcing social relationships (Beardsworth & Keil, 1997; Germov & Williams, 2004; Lupton, 1996; Mennell, Murcott, & van Otterloo, 1993b). Given that food is centrally important to social life it is curious that nutrition science has maintained a narrow focus on the biological and physiological impacts of food.

Patricia Crotty astutely observed "the act of swallowing divides nutrition's "two cultures", the post swallowing world of biology, physiology, biochemistry and pathology, and the pre-swallowing domain of behaviour, culture, society and experience" (Crotty, 1993, p. 109). Though nutrition has focused on the post swallowing aspects of food, social perspectives of food are clearly relevant to nutrition. This is particularly true in applied nutrition sciences where efforts are directed toward food and eating patterns which impact upon nutritional status, and influence health (Coveney, 2002; Cox & Anderson, 2004; Raine, 2005). However in fields of applied nutrition, food and eating has been treated primarily as individually determined behaviour. Very little, but important ground breaking work, has contributed social perspectives of food to nutrition by examining the social organization and relationships that underlie collective aspects of eating (Coveney, 2004a; Travers, 1996; Wills, Backett-Milburn, Gregory, & Lawton, 2005). Population eating

patterns are the targets for public health nutrition yet we understand little about the processes that shape collective eating patterns (Murcott, 1988). This thesis aims to contribute a social perspective of food choice to public health nutrition by exploring food choice as a social practice.

From a historical perspective, nutrition has been a long standing issue of concern for overall public health. Thomas McKeown shed light on the profound relationship between improved nutrition, food safety and access, and standards of living, with dramatic reductions in mortality observed in 19th century England and Wales (McKeown & Record, 1962; Szreter, 2002). In contemporary public health forums, food safety issues and food access remain important. However the scope of nutrition issues has broadened, adding the role of dietary risk factors related to chronic diseases such as diabetes, cancer and cardiovascular disease in populations (Gibney, Margetts, Kearney, & Arab, 2004). Researchers have also noted that a well nourished population contributes to a healthy, more productive population, lower health care and social costs, and better quality of life (Health Canada, 1996). Therefore it is troubling that nutrition surveys consistently reveal that large segments of national populations have inadequate dietary intakes (Garriguet, 2006; World Health Organisation, 2003). Being able to modify poor dietary trends relies on adequate knowledge about the determinants of healthy eating. Nutrition problems are a social phenomena and therefore require solutions that reach beyond technical remedies to address complex social realities (McLachlan & Garrett, 2008). It is within this context that socially informed perspectives on diet, food and nutrition are proposed.

Population health perspectives of nutrition have tended to view food and food choices in terms of dietary risk factors. On the one hand, examined bio-medically, food is a source of nutrients which determines adequate or inadequate nutritional status and biological function. Why people choose to eat what they do is irrelevant since nutrients are the focus. On the other hand when food choices are considered, psycho-social understandings view food as the object of individual food preferences. Psycho-social models of food choice emphasize personal motivations and personal efficacy as the main drivers of food-related decisions framed as discrete dietary behaviours or risk factors. Thus food choice is viewed as individual phenomenon and response to personal and environmental stimuli (Axelson & Brinburg, 1989; Bandura, 2001).

Social perspectives, which characteristically regard food choices as patterns of human activity reflecting social contexts, have largely been neglected. There has been little investigation into the social patterning of food practices in population groups and how these may impact diets and nutritional status. Identified gaps exist in our understanding of the collective determinants that structure food choices and healthy eating, namely interpersonal, social and physical contextual factors (Raine, 2005). An understanding of food choices as dynamic processes integrated in structured contexts would provide a new way of thinking about population eating patterns. Perspectives that address diets and food choices as the expressions of distinct group characteristics hold potential to advance knowledge of population nutrition patterns. The goal of this thesis is to address these gaps by demonstrating that food choices are social phenomena.

The dialectical relationship of families and their food choices

This thesis concentrates on food choice patterns in families with young children. Positive nutrition status is crucial to healthy childhood growth and development. Moreover food habits that form early in life track into adulthood and affect future health status (Dietz, 1998; Flynn et al., 2006; Kelder, Perry, Klepp, & Lytle, 1994). Thus improving children's food choices are a priority for public health nutrition action plans.

Families are recognized as the most influential social system shaping the food choices of children (Birch & Fisher, 1998; Hill, 2002; Lupton, 1996). As social systems, families are created through activities that link members as a coherent collective. It is within families as systems of practices (Morgan, 1996) that this thesis proposes   family food choices are socially structured. Current models of food choice envision families as an important setting for children's food intake. Families are not conceptualized as dynamic systems of social relationships in which food patterns and styles of eating are molded. Rather family is regarded as an environment or setting influencing dietary behaviours. Conceptualizing families this way reduces family dynamics to merely a setting and variable of influence by neglecting the social relationships and processes comprising the dynamic context in which family food practices are forged. The nutrition literature rarely views families as important institutions for structuring food choices. In fact, there is very little theorization that proposes food choices as dynamically integrated and structured by family life.

This thesis proposes a theoretical framework informed by Structuration Theory (Giddens, 1984) in order to demonstrate that food choices are social practices. We adapt

concepts from this theory to explore food choices as integrated into the activities that constitute social life. Though structuration theory is an ambitious explanation for the constitution of society, the concept of social practice upon which the theory rests, is modest and appealing because social practices are contextualized activities people carry out in their everyday lives. Thus as social practices we identify food choices as a set of regularly occurring food-related activities. Social practices acknowledge that people have choices which they creatively carry out because they have agency. Agency implies the capacity for human agents or collectives to deploy causal powers and intervene in the social world. However, the concept of social practice also recognizes that choice is always structured by the rules and resources presented in the course and contexts of action. Furthermore, rules and resources are differentially distributed in society structuring contexts that can be constraining or enabling. Rules and resources are recognized as being in a recursive relationship, which explains how practices are organized, or structured, into patterns that recur over time. Routinized practices, because they repeat over time in recognizable forms, are the basis and explanation for the constitution of social systems. Giddens identifies social systems that have the longest endurance, as institutions.

The Food Choice Practice Framework, developed and explored in this thesis, is based on the operationalization of Giddens' notions of social practice. Thus, routinized food choices are understood to contribute to social systems, and institutions; routine food choices contribute to, and are in turn, structured by family social systems. In this thesis, the empirical demonstration of food choice as a social practice involves exploring the everyday food experiences of families with young children.

Two empirical studies provide support for the theoretical proposition that family food choices are social practices. The routinized character of food choice was described, and characterized as five recognizable and recurrent patterns across families in the study. Social structures, proposed as organizing the patterning of food choices, were investigated using Giddens' concepts of *rules* and *resources*. Thus the rules as systems of meaning and norms, and material and authoritative resources structuring family food choice practices were also described. The ways in which 'rules and resources' configure opportunities and challenges that shape families' food choices was demonstrated from the structuration analysis. Results from this research support the argument that food choice routines are important activities shaping family food patterns. The empirical results further support the thesis advanced in the first article, namely that routinized food choice practices both structure and are structured by the family system. Thus families appear to be more complex than they have been conceptualized in the past, as setting or predictor for dietary behaviour. As well family food choices practices are collective expressions that appear more dynamic than individual dietary behaviours.

Foundational studies for developing the Food Choice Practice Framework

Two research studies provided important ontological directions for constructing the Food Choice Practice Framework. The first was Travers' study investigating the social organization of nutrition inequities (Travers, 1996). "Nutrition inequities are socially constructed, but people themselves are drawn into the relations organizing those inequities" (1996, p. 544). This theoretical stance articulated the interdependent relationship of human

agency and social structure involved in the social organization of nutrition inequities. Travers' work demonstrated how configurations of social relations that organize society create the constraining circumstances experienced by low-income families as well as for the women responsible for feeding their families. This perspective views the daily activity of family feeding as involving human agency and creativity but profoundly impacted by social constructs, such as age, class and gender relations organized beyond the immediate, micro-level of family experience. The study provided an informative example of family feeding as an experience and social process, and relationship of social structure and agency.

The second inspirational work was the Collective Lifestyles Framework (Frohlich, Corin, & Potvin, 2001). This innovative framework adapted the concept of *social practice* to theorize the structuring features of social context as recursively organized, distinct configurations of shared practices, or *collective lifestyles*. The Collective Lifestyles Framework offered a conceptual mechanism for explaining how patterns of practices generate from similar contexts (Frohlich, Potvin, Chabot, & Corin, 2002). Collective ways of doing things were empirically demonstrated by these researchers in the distinct patterns of youth smoking practices from different neighbourhoods in Québec. The Collective lifestyles framework provided direction to examine food choices as collective features of families. Furthermore, it offered an example of an operationalization of Giddens' notion of social practices and distinct conceptualization of social structure as a promising theoretical direction for developing the Food Choice Practice Framework.

Outline of the thesis

The thesis is organized around three separate research articles. Each article addresses a distinct question but is coherently linked to support the argument that food choices are a social practice. The literature review following this introduction serves to expose the limits in current public health perspectives which privilege individual paradigms of food choice, and to identify the need for innovative perspectives, and theory, to understand food choice patterns as social and collective phenomena.

The first article outlines the theoretical framework (Delormier, Frohlich, & Potvin, 2009) that is the foundation of this thesis. Concepts of *social practice*, *duality of social structure* and *agency* from Giddens' structuration theory, are borrowed to define food choice as social practice. In this framework, social practice symbolizes an interplay of agency and social structure defined as rules and resources. Food choices as social practices are methods, techniques or procedures carried out by people in the rhythm of daily life. Giddens' distinct duality of social structure as both the means and outcome of social practice provides the mechanism by which food practices are understood to be both structured, and structuring.

The Food Choice Practice Framework is empirically tested through two studies. The study methodology provides a detailed description of the study context and the community of Kahnawake. The study population and recruitment procedures are then presented. Data collection and analysis methods are briefly discussed with further details found in the empirical articles. Finally the procedures and features of the study which address the trustworthiness of the findings are detailed.

The second article presents the first empirical study exploring food choices from among families' usual activities. The purpose of the study was to describe food choice routines and characterize these as an interplay of *agency* and *social structure*. The data are derived from open-ended, qualitative interviews with the person primarily responsible for family food choices and preparation. The findings present five distinct food choice practices found across the families in the study. The types of food choice practices identified suggest that food choices are embedded in recurring practices that are part and parcel of family life.

The third article presents the second empirical study designed to reveal the *structuration* of food choice practices. The study pursues two objectives: the first was to identify empirical instances of social structural rules and resources, and the second was to explain how rules and resources create opportunities and challenges for the most richly described routine food choice observed across families, that of creating regular meals.

The discussion chapter re-visits the thesis and synthesizes the empirical evidence in support of the view of food choices in families as a social practice. The strengths and implications of this theoretical proposal are considered in relation to the field of public health nutrition, and to sociology as an example of Structuration Theory. The limitations of the study are then considered, followed by an outline of future research directions that could contribute to further developing the food choice social practice perspective.

The study background

The context for this study is the Kahnawake Schools Diabetes Prevention Project (KSDPP). The KSDPP is a community-based health promotion project located on the Mohawk territory of Kahnawake. Ongoing since 1994, the KSDPP involves researchers from several universities, community researchers, and the active participation of community members in all aspects of the project. The KSDPP works toward a vision of a diabetes free community through the partnership of community members and academic researchers (Cargo et al., 2003; Macaulay et al., 1997; Potvin, Cargo, McComber, Delormier, & Macaulay, 2003). As a KSDPP community researcher I proposed and developed this study with parallel objectives of contributing to the KSDPP's nutrition intervention design, and to acquire training as a researcher.

The research respects the ethical practices outlined in the KSDPP Code of Research Ethics (Kahnawake Schools Diabetes Prevention Project, 2007). The code reflects the responsibilities of the Kahnawake community to care for future generations, or in Mohawk culture, the future seven generations. It recognizes KSDPP's responsibility to conduct research that benefits the community of Kahnawake, and the responsibilities of academic researchers to their institutions. The knowledge resulting from the study of family food practices is expected to benefit the community of Kahnawake through KSDPP's participatory research process. The contribution of the dissertation offers public health and health promotion a novel theoretical direction to investigate food choice as socially structured processes. It also shares an empirical application of Giddens' structuration

theory. The research project achieves the knowledge creation objectives of both the community and academic institutions.

LITERATURE REVIEW

Obesity – public health problem in search of solutions

Obesity continues to command high priority as a public health problem (WHO, 2000). Despite efforts on many fronts to combat obesity, trends are not improving. This is troubling since obesity is a risk factor for a number of chronic diseases. The scope of the problem includes childhood obesity where prevalence is also increasing (Chopra, Galbraith, & Darnton-Hill, 2002; Ebbeling, Rawlak, & Ludwig, 2002; Lobstein, Baur, & Uauy, 2004). In Canada, the prevalence of obesity in children, seven to thirteen years of age, has increased from 5% in 1981, to 15% in 1996 (Tremblay, Katzmarzyk, & Willms, 2002). Recent reports of alarmingly high rates of overweight and obesity among preschool children in one Canadian province suggest the need for prevention measures earlier in childhood (Canning, Courage, & Frizzell, 2004). Clear explanations of obesity trends are essential for effectively addressing the problem.

Obesity is explained as resulting from a chronic imbalance between dietary energy intake and energy expenditure (Nestle & Jacobson, 2000; Weinsier, Hunter, Heini, Goran, & Sell, 1998). Obesity trends observed globally are explained as coming about through social transformations in eating and physical activity patterns that promote excessive energy intakes (Farley & Cohen, 2001; Hill, Wyatt, Reed, & Peters, 2003; Jain, 2004; Popkin, 2006). These changes are reflected, for example, in families where employment translates to more meals eaten out of home and food services at work, school and daycare where food can be high in energy and low in nutrition (Guthrie, Lin, & Frazao, 2002). As well, women's participation in the workforce and changes in family structures, such as increased single-parent families have increased the value and use of convenience food

(Banwell, Hinde, Dixon, & Sibthorpe, 2005; Hill, et al., 2003). Changes in the food system and marketing strategies promoting consumption are also implicated (Lang & Hesman, 2004; Nestle, 2002). Explanations for national and global obesity trends suggest that modern living in "obesogenic" environments favours lifestyles that generate chronic, excess energy imbalances. Ironically, obesity prevention efforts have not targeted "obesogenic" environments, rather obesity prevention has tended to focus on individual behaviour change strategies (Friel, Newell, & Kelleher, 2005) that target diets and physical activity as risk factors (Egger & Swinburn, 1997; McNeil & Flynn, 2006). To date programs to modify behavioural risk factors have not been effective in preventing obesity among children (Baranowski, Mendlein, et al., 2000; Flynn, et al., 2006; Kumanyika, 2005; Summerbell et al., 2009; Swinburn, Gill, & Kumanyika, 2005).

The lack of successful obesity prevention has opened a large debate on the effectiveness of individual behaviour interventions for combating a problem with deep-rooted social explanations (Candib, 2007; Kumanyika, 2005; Livingstone, McCaffrey, & Rennie, 2006; Nestle & Jacobson, 2000). The critique of individual behavioural interventions is not limited to childhood obesity prevention however. Approaches in public health that target health-related behaviours as risk factors, for example, condom use or cigarette smoking have received criticism for neglecting the social structures underlying behavioural risk patterns in populations (Frohlich, 2000; Glass & McAtee, 2006). In public health nutrition, the need to better understand the social context underlying unhealthy dietary patterns has begun to be recognized (Crotty, 1993; Gregory, 1995; Travers, 1997).

Unfortunately social perspectives are still rarely used in public health to understand nutrition issues.

Perspectives of food in nutrition

Distinct perspectives of food give rise to different theoretical assumptions concerning human food choices. In nutrition research three perspectives on food can be distinguished: biological, psychological and sociological. Briefly, the biological approach examines food as a source of nutrients required for optimal physiological functioning. Inspired by this approach, experiments are designed to manipulate nutrient intake profiles and examine physiological changes, such as body weight, adiposity, serum cholesterol, etc. The processes involved with human food choice is of little concern for adherents to this approach. Psychological perspectives regard dietary behaviours as individual traits and modes to improving nutrition status. Food choice behaviours determining nutrient intakes are targeted for change by manipulating personal and environmental factors understood to influence core psychological constructs of individuals that determine dietary behaviour. Lastly, social perspectives focus on the symbolic meaning of food and its integral role in social relationships. Social perspectives re-frame nutrition issues as social issues by regarding food choices as social activities integrated into social contexts. The preoccupation of social perspectives is to understand how food practices can provide insights about society.

The objective of this literature review is to demonstrate how and why the theoretical assumptions in current understandings of food choice based on psycho social models

inadequately accommodate the characteristics of food choices as social phenomena. Because this literature review is concerned with understandings of food choices we will address only psychological and sociological perspectives.

Psychological models of food choice

Social psychological theories of behaviour form the basis for the dominant understanding of food choice in public health nutrition, nutrition education and behavioural nutrition (Achterberg & Miller, 2004; Baranowski, 2006; Contento, 2008; Cox & Anderson, 2004). These areas of research all regard food choice as an individual behaviour. Largely guided by social cognitive theories, food choice is modelled as rationally controlled by individuals and determined by conscious beliefs and attitudes, to the exclusion of habitual (or unconscious) processes (Axelson & Brinburg, 1989). Social cognitive theories most often used to explain dietary behaviour change are the Theory of Planned Behaviour (Fishbein & Ajzen, 1975), the Health Belief Model (Maiman & Becker, 1974) and the trans-theoretical model of change (Prochaska & DiClemente, 1982). Bandura's Social Cognitive Theory (SCT) is most commonly used in nutrition interventions designed for populations (Contento, 2007; Pate et al., 2000).

Bandura's Social Cognitive Theory: agency operating in social structure.

In Social Cognitive Theory environmental factors, personal factors and behaviours are understood to interact (Bandura, 1986). The core determinant of food choice behaviour is individual cognitive control. Essentially SCT aims to identify environmental and

personal factors that result in self-efficacy and intentions that precede desired behaviour change.

The utility of Social Cognitive Theory has been supported by an extensive body of experimental research (Bandura, 1986). This research has been conducted with individual clients or patients enrolled in intensive interventions such as individually tailored treatment programs. SCT has also been effective in the individual management of diagnosed heath-risk factors or diseases (Bandura, 2004). In practice, SCT offers a way to identify determinants of individual behaviour change, for example: the expectations of cost and benefits resulting from change; the health goals people set for themselves; and concrete plans for realizing them (2004). Bringing about behaviour change in individuals who are motivated to manage disease in clinical settings is different from bringing about changes to in groups of people which is the concern of public health. Among free living populations collective eating patterns are shaped in relatively uncontrolled contexts without intensely supported strategies of clinical settings. This may be one reason why the effectiveness of interventions based on Social Cognitive Theory for population-level diet-related behaviour change is limited (Glass & McAtee, 2006; Resnicow, Robinson, & Frank, 1996; Stokols, 2000). The theoretical assumptions underlying SCT have rarely been assessed for their application in population settings.

The theoretical assumptions underlying SCT reveal an emphasis on agency (Bandura, 2001). Though SCT rejects the agency/structure dualism by acknowledging that "personal agency operates within a broad network of sociocultural influences," (2001, p. 13) agency is still given greater credence. In the model, environmental and social-cultural

influences operate though psychological mechanisms to effect certain behaviours. Psychological mechanisms are the result of personal aspirations, sense of efficacy, personal standards and self-regulation. These personal constructs are understood to be the core determinants of behaviour.

Bandura characterizes his social cognitive model as an agentic perspective (Bandura, 2001). It explains how people rationally decide on setting a chart for their behaviour in terms of conscious, health-directed goals. The place of social structure is secondary to a determining psychological pathway. There is no explanation, for example of how the self system and personal efficacy are socially structured by class, gender, and social status. When discussed in terms of health promotion, the social cognitive perspective normatively assumes that health goals are the positive and expected ones (Bandura, 2004). Again this may be appropriate for people managing diseases with the assistance of health professionals. However in relatively healthy, free-living populations, motivations to improve health, and intensive treatment resources to achieve behaviour change, cannot be assumed.

Evaluations of interventions based on social cognitive theories of food choice behaviour

A number of school-based, dietary change trials based on SCT have been rigorously evaluated. These projects demonstrate the operationalization of SCT in population contexts. Personal factors such as self-efficacy, knowledge and intentions are manipulated through curricula (knowledge), classroom activities and skill building to promote changes in specific eating behaviours. School food services and families are the typically targeted

environmental influences. Evaluations have measured separate associations of single psychosocial constructs (personal factors) and aspects of the school environment (environmental factors) with dietary intakes (indicators of modified eating behaviour) (Baranowski, Klesges, Cullen, & Himes, 2004).

The Child and Adolescent Trial for Cardiovascular Health (CATCH) was designed to test the effectiveness of a school program to modify behavioural (diet, smoking, physical activity) and physiological (body mass index, serum cholesterol) risk factors for cardiovascular disease (Resnicow, et al., 1996). The dietary component was designed to modify personal factors (knowledge, efficacy, skills) and environmental factors at school (fat and sodium reduced lunches) and in the family via school-delivered activities (Lytle et al., 1996). CATCH was somewhat successful in modifying predictors of dietary behaviour delineated in the model, however behaviours were not significantly changed nor were any CVD physiological risk factors (1996).

The project called Pathways was designed as an obesity prevention trial in seven American Indian nations. Similar to the CATCH objectives, Pathways aimed to modify personal factors and create supportive environments for healthy eating and physical activity for children in grades three to five (Davis et al., 1999). The core interventions were skill-development curricula, school food services, family and physical activities. Positive changes were achieved at the individual level in children's knowledge and intentions to eat healthier, and also at the structural level through the modification of the fat content in cafeteria food menus. Improved dietary fat intakes, and dietary intake assessed out of school, suggested behaviour changes, though no impact on obesity was achieved.

Outcomes showed no significant changes in children's percent body fat three years later (Himes et al., 2003).

A number of smaller trials designed to improve fruit and vegetable intake and attain five servings a day have been replicated in the United States. These have also achieved modest results in terms of behaviour changes (Baranowski, Davis, et al., 2000; Nicklas, Johnson, Myers, Farris, & Cunningham, 1998; Perry, Bishop, Taylor, & al., 1998). Interventions were able to change school lunch menus and cognitive factors through classroom curricula and family activities, however average increases in fruit and vegetable intakes, were 0.30 to 0.58 servings per day and did not achieve clinical significance (2000).

Limitations in behavioural interventions in school-based health promotion

Intervention trials with school children have raised a number of critiques about the effectiveness of behavioural nutrition education in schools. A review of school-based cardiovascular risk factor trials found that dietary interventions were effective in changing only twenty-five percent of targeted dietary outcomes (Resnicow & Robinson, 1997). The future of nutrition education in light of modest outcomes suggests that effectiveness may be improved through better implementation and evaluation practices (Perez-Rodrigo & Aranceta, 2003; Perry et al., 1990; Resnicow & Robinson, 1997). Some have suggested that the intervention dose delivered by programs might have been too weak to elicit significant behavioural changes. Others recognize that while school environments are important influences on children's health behaviours, families are the primary environments where food habits are formed. Components in interventions addressing the influence of families

on dietary behaviours, however, have been relatively less important compared to school-focused activities.

It has been put forward that improvements and refinements to the content of behavioural nutrition intervention are needed. This critique addresses the ways SCT, as the dominant theoretical framework, has been variably operationalized in school-based interventions (Resnicow & Robinson, 1997). Other limitations lie in the lack of understanding of how SCT's core determinants, for example, self-efficacy, outcome expectations and self regulatory skills specifically apply to children's dietary behaviour. Questions remain on how these interact and the best way to modify them (1997). More theory-based research is needed in order to advance our understandings on modifying children's behaviour (Baranowski, Cullen, Nicklas, Thompson, & Baranowski, 2003). However identified new directions for research rest upon elaborating current theories by identifying possible mediating variables along the pathway to dietary behaviour change (Baranowski, 2006).

Other critiques of SCT based interventions point to the lack of interest paid to *reciprocal determinism*, a key concept in SCT that proposes that a person's behaviour both influences and is influenced by personal factors and the social environment (Bandura, 2001). According to Social Cognitive Theory *reciprocal determinism* is the idea that behaviour is controlled or determined by the individual, through cognitive processes, and by the environment, through external social stimulus events. For example, a child's fruit and vegetable consumption (behaviour) is influenced by her/his personal food preferences (personal factors) and the food availability in the home provided through the family

environment (Resnicow et al., 1997). Children's food preferences can influence parent's food purchases thus shaping the home food environment of children. The construct of reciprocal determinism has not been examined empirically in school-based nutrition interventions (Resnicow & Robinson, 1997). Examinations have focused on one-way associations between specific personal or environmental determinants with dietary behaviours or intakes (Perez-Rodrigo & Aranceta, 2001, 2003) . Thus looking at dynamic interactions among multiple influencing factors recognized as shaping dietary behaviour has been relatively unexplored using SCT.

Contextual influences on food and eating

The role of interactions between people and their environments has been emphasized by social ecological perspectives of health (Stokols, 1996). Because environments may bring about health disparities through their influence on health behaviours, researchers are keen to better understand this relationship. The direction of research into food environments, however, often ignores the social relational aspect between people and the places they live. The interest in local environments and people's diets is growing in public health.

Physical environmental influences on food, nutrition and eating patterns

The term 'context' is used loosely to capture the characteristics of real world settings. Food environments, and how they impact diet, are one aspect of context gaining more attention. Research in this area has focused primarily on features of food access and availability. For example, a study of diet and supermarket availability found that for each

additional supermarket in a census tract, researchers estimated an increase in fruit and vegetable intake of 32% for 'black' Americans[1], and 11% for 'white' Americans (Morland, Wing, & Diez Roux, 2002). The explanation offered for the weaker association was that 'white' Americans had greater access to personal transportation and hence flexibility to drive to supermarkets located further away. In the study however the ways people accessed food was not measured. It was recognized that geographic regions reflected racial segregation, leaving the authors to suggest a possible race/locality interaction indicative of a 'race specific mechanism' which they did not further explain.

The number and types of food retail stores associated with neighbourhoods of different socioeconomic status has also been explored. Diez-Roux and colleagues attempted to disentangle the influence of the average neighbourhood income from individual-level income, and measure their respective impacts on dietary intake (Diez-Roux et al., 1999). Using neighbourhood-level income as a proxy for social-environmental characteristics, they found people from higher income areas had higher intakes of fruit, vegetables and fish, compared to those from low income neighbourhoods. After adjusting for individual income, these dietary patterns remained but were not statistically significant. It was therefore unclear if area measures of income influence diet since individual-level income seemed to be a stronger predictor. The authors suggested that adjusting for individual income may attenuate neighbourhood effects. Alternatively neighbourhood-level income may not be a sensitive indicator of how socioeconomic complexities impact upon dietary intakes.

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[1]   The terms black American and white American were employed by the authors of the study and their definition and meaning were not provided in the study.

Most research on local food environments addresses food access and availability without addressing the range of events involved that lead to dietary intake, among which is food choice. The term 'food deserts' was coined to describe the absence of retail food outlets in deprived neighbourhoods in the United Kingdom (Cummins & Macintyre, 2002a). Other studies have followed examining the relationship between food availability and access in local food environments and socioeconomic status. In poor areas in the United Kingdom, where discount and chain stores tended to be located, food prices did not vary greatly compared to higher socioeconomic areas, but when they did differ, food was cheaper in poorer areas (Cummins & Macintyre, 2002b). Mooney similarly found both healthy and unhealthy food baskets to be cheaper in poor areas, and that the cheaper foods in these areas were also of poorer nutrition quality (Mooney, 1990). In Montreal, fast food outlets were found to be associated with the density of roads, though no associations were found with census defined, neighbourhood socioeconomic status (Daniel, Kestens, & Paquet, 2009). Investigations on the types of stores in various locations have revealed that large supermarkets tend to be found in low-poverty areas, while smaller, non-chain food stores are more often found in higher poverty areas (Reidpath, Burns, Garrard, Mahoney, & Townsend, 2002). Others have found greater concentrations of fast food restaurants in low socioeconomic status neighbourhoods (Chung & Myers, 1999). The growing interest in local food environments has spawned a number of food access and availability measures. The relational aspects concerning how people interact with food environments, have thus far, been overlooked.

Investigations of food access and availability describe what features of environments may be important factors influencing food and nutrition. However these approaches do not offer explanations for how people interact with food environments. There is a lack of research exploring the mechanisms by which food environments shape people's interaction to influence food, diet and nutrition. Thus there appears to be an opportunity to consider the social relational aspects of food choice and food choice environments. An interesting development emerging from food environment research is the study of perceptions of local food environments. This work brings in people's perspective on the places they live and how these relate to geographically derived measures of local food settings. Moore and colleagues found associations between place perceptions and measures of food environment characteristics (Moore, Diez Roux, & Brines, 2008). They further noted that participants who gave the worst rankings of food environments were also less likely to have healthy diets (Moore, Diez Roux, Nettleton, & Jacobs, 2008). Measures based on perceptions are one way to approach social relational aspects of food environments. To date, however, such studies are rare.

Overall, research on local food environments and diet is just beginning to grow. Future studies will benefit from clearer conceptualizations of the way physical environments are understood to impact upon diet (Giskes et al., 2007). Studies so far are mostly observational, or cross sectional in design, thus data is limited to reporting associations between environmental factors and dietary intakes. There is also a need to move beyond the tight focus of local food retail to broader concepts of whole food environments and how these are related to behaviour and ultimately diet and morbidity

(Townshend & Lake, 2009). Assessing local food environments as food availability and access, though helpful in describing environmental features that may be important influences on diets, does not explain how people relate to, and use these resources in their daily lives.

Family contexts and food choices

Family represents a key context influencing diet and nutrition. Especially when considering children, family is the recognized environment of socialization (Campbell & Crawford, 2001; Nicklas et al., 2001). In reviews of children's food choice, family is regarded as a social influence, determinant, or environment (Campbell & Crawford, 2001; Crockett & Sims, 1995; Nicklas, et al., 2001; Patrick & Nicklas, 2005). Nutrition studies tend to operationalize families as determinants or predictors of dietary intake. In other approaches parental influences on child behaviour are the focus. In general families are rarely approached as rich systems of social interaction in which children's food patterns form (Wardle, 1995). We briefly examine the ways families are conceptualized when understanding the ways families impact upon children's dietary behaviours.

Parenting and Parent/child interactional influences

Parenting is one aspect of family examined in relation to children's diets. Parental influences can be transmitted to children through food preferences, knowledge, beliefs and attitudes (Birch & Fisher, 1998; Lipps Birch, 1987). Parental modelling is a social learning mechanism that explains how children learn food acceptance, preferences, intake and willingness to try foods by observing others (Patrick & Nicklas, 2005). Active forms of

parenting have also been studied. The concept of 'parenting styles' has been adapted to study 'feeding styles', and suggests that restrictive and forceful feeding, or permissive styles, have different and often negative impacts on food intake, attitudes and eating styles of children (De Bourdeaudhuij & Van Oost, 2000; Hughes et al., 2006; Stanek, Abbott, & Cramer, 1990).

Family as home environment

The home environment has been studied as one aspect of family and emphasizes food availability and accessibility. Access and availability of fruit and vegetables at home and school have shown modest associations with their reported intake by students (Davis Hearn et al., 1998; Domel, Baranowski, & Davis, 1993). A comparison of six study sites differing in socioeconomic status and ethnicity, used focus groups with students and parents to investigate family influences on food choices. Fresh fruit and vegetables were more available in higher SES homes, while their canned and frozen versions were more available in lower SES homes. Parents in high SES groups were more likely to prepare cut up fresh fruit and vegetables for their children. Going to fast food restaurants, and not ordering fruit and vegetables when eating out, were two dietary behaviours characteristic across the study sites. Despite specific associations of certain behaviours with socioeconomic status/ethnicity, the recommendations stemming from the research did not take these into consideration. Instead identified interventions focused on modifying parental behaviours toward increasing fresh fruit and vegetables, and motivating parents to cut up fruit and vegetables for their children, especially in the homes of low SES groups. Furthermore questions regarding differences in dietary behaviours patterns by

socioeconomic status were not explored. The lack of attention to the relationship between different family circumstances and patterns of intake are highlighted by the suggestion that low-socioeconomic status homes try behave more like their high socioeconomic status counterparts.

Similar to the way food environments have been studied, family is regarded as influencing food availability or access and impacting upon on specific behaviours, in this case fruit and vegetable intake. Behavioural theories are evident in the ways food choice is isolated as a dietary intake, and families conceptualized as social and physical environmental stimuli. The explanation for distinct food practices related to food preparation and consumption observed across study sites were not accommodated by the model of food choice centred on individual dietary intakes of the adolescents.

Family Socioeconomic Status

Socioeconomic status can operate through families as well. Children in families with higher income experience a greater likelihood of having better nutrient and dietary intakes (Patrick & Nicklas, 2005). Higher attainment of parental education has been associated with health consciousness of food choices (North & Emmett, 2000) and higher intakes of several nutrients, consumption of vegetables and greater likelihood of consuming the recommended number of dairy products, for adolescents (Xie, Gilliland, Li, & Rockett, 2003). Observed differences in diet quality and nutrient intakes among ethnic groups may reflect cultural and/or socioeconomic differences. African American children in the Bogalusa heart study had higher consumption levels of fat, cholesterol and carbohydrate compared to Euro-Americans (Nicklas, Johnson, Myers, Webber, & Berenson, 1995).

Other research has shown that American Indian adolescents tend to consume inadequate levels of fruit, and that African American youth consume inadequate levels of vegetables (Neumark-Sztainer, Story, Resnick, & Blum, 1998). Mechanisms to explain how socioeconomic status operates through families, to explain different dietary and nutrient intakes, have not been proposed or examined.

Family meals

Given the number of family characteristic found to individually influence diet, relatively little is known about the processes that shape family food choices (Brown, 2006; Wardle, 1995). Family meals are one aspect of family life increasingly being studied. Research on family meal times identify increased frequency of meals eaten at home and fewer 'fast food' meals to be associated with better nutrient intakes. The frequency of eating meals together at home has been associated with higher intakes of fruit, vegetables, grains, calcium containing beverages and lower intakes of soft drinks (Gillman et al., 2000; Larson, Neumark-Sztainer, Hannan, & Story, 2007; Neumark-Sztainer, Hannan, Story, Croll, & Perry, 2003). Given that family meals are associated with better dietary and food intakes, interventions are encouraged to support families eating together, though it is not clear if this is generalizable to all families. The mechanisms for how eating together improves dietary intake has not been examined.

Family as a key context for children's socialization and development underscores the importance of a family's impact on shaping the way children eat. However most nutrition studies investigating families have been descriptive. As a result we have an impressive list of socioeconomic, social and physical environmental factors that are

associated with numerous dietary intakes of interest. Research has not investigated families as dynamic social relationships which shape food patterns (Bruss, Morris, Dannison, & Orbe, 2005). We therefore propose to explore why patterns of practices, such as eating together, shape better dietary intakes, and how this relates to different family conditions configured by combinations of factors such as available time, money, education, skills and local food environments.

Social perspectives of food choice in public health nutrition

In writing about the value of qualitative research in nutrition, Patricia Crotty effectively identified the lack of attention public health dietary reform policies had paid to the social forces shaping nutrition (1993). She noted that despite policy objectives targeting dietary reform, there existed little interest and knowledge concerning the processes of dietary change. She pointed out that "if two out of three meals are eaten in the home, an in depth understanding of the social context of food behaviour should underpin dietary reform." (1993, p. 115). Social research on food and families has been the foundation from which nutrition has built an understanding of the social context of food choice.

Two studies in particular have led the way in illuminating how broad social forces impact upon family food use. Both were concerned with family feeding as domestic work and how relations of gender inequality were reproduced in families. Charles and Kerr's study in the UK illustrated how family food practices were fundamentally influenced by class, age and gender (Charles & Kerr, 1988). Similarly, DeVault's study of US families explicated the social organization of women's *caring work* (DeVault, 1991) explaining the

inequalities in the way domestic activities were organized. These studies provided the foundational perspective that the seemingly mundane activity of family feeding contributed subtly, but forcefully, to reproducing social inequalities.

Travers' research on the social organization of nutrition inequities stands out for its theoretical and empirical significance to public health nutrition (Travers, 1996). Taking up the direction from social research, Travers proposed that nutrition inequities are socially organized and recreated in the daily interactions of people within structured social relations (1996). By analyzing the food practices of mothers on social assistance she traced the social constructs; gender, class, policy (social welfare), discourse (professional nutrition/health) and commerce (food, etc.) involved in configuring oppressive family feeding circumstances. She argued that community nutrition education practices which focus on passing information to individuals must be reoriented toward addressing the social problems in which nutrition inequities are rooted.

The strength of this study was its clear theoretical explanation for how people are linked to contexts comprised of local social relations. The study proposed food practices as processes based on an interplay of social structure and agency. The empirical work made explicit the role of the broader social structure in creating oppressive family feeding conditions.

Two other theoretical proposals for accessing the structuring features of food practices were identified from the literature. Power adapted Bourdieu's concept of *habitus*, an internalized, socially structured, disposition orienting a person's practices in distinct ways dependent on contexts (Bourdieu, 1980; Power, 1999). Power proposed the idea of

the *food habitus*, the structured disposition embodied and shaped by particular biographies and experiences which orients food practices observed in certain configurations. In this view contexts are also structured, through the different forms of available *symbolic* (cultural) and *material capital* available to those who interact within them. This is an interesting theoretical proposal for understanding structured contexts and the asymmetrical relations shaping available capital within them, unfortunately there has not been empirical validation of this work. More recently Schubert proposed *household food strategies* as a theory, method and unit of analysis for re-framing individual-centred understandings of dietary practices (Schubert, 2008). Her proposal is rooted in the anthropological tradition of studying household food production, and in the sociological perspective of health lifestyles (Williams, 2003) to conceptualize food-related decisions in households as an issue of social structure and agency. Re-framing dietary practices as *household food strategies* aims to account for the wider socio-economic determinants of nutrition and their relationship to food provisioning patterns at the level of households. Schubert has not yet empirically investigated her theoretical proposals to date.

These theoretical developments converge around identifying families as socially structured contexts, and supporting food practices as collective experiences. The theoretical underpinnings explain food practices and context interactions employing a dialogical relationship of social structure and agency. Methodological direction is furnished by identifying food practice experiences as the window through which broader social relations can be analyzed. Clear ways to operationalise the abstract ontological concepts of social

structure, agency and their recursivity to explain food practice, however, remain underdeveloped, and given this, their operationalization in empirical work is lacking.

A few empirically-based clues as to how structure may operate to shape patterns of food related practices were found in two studies examining dietary change as a process occurring in families. In Gregory's investigation, the dietary change process involved chronic disease management of one family member (Gregory, 2005). Assuming that routine family practices create *ontological security*, she investigated how diet prescriptions were accommodated. She showed that dietary changes implemented at the level of families cause disruptions in food practice routines, and thus normal family life. Families made efforts to integrate prescribed dietary changes in ways that would re-establish normality. Though dietary prescriptions are given to individuals, their implementation had a collective impact upon family life.

Beagan and Chapman compared family support for dietary change in families. They found that families with a member who had survived breast cancer were more supportive of health focused dietary changes. Even though breast cancer affected only one family member, the collective experience was reflected in family support expressed toward changing food practices. In families without breast cancer survivors, the same motivations did not manifest for dietary changes (Beagan & Chapman, 2004). The process of dietary change and its motivations demonstrate that family dietary practices are social interactions. Indeed more empirical work is required to understand these social processes.

One area of empirical research that has developed in recent years are *constructionist* or *constructivist* approaches contributed to by the The Cornell Food Choice Research

Group at Cornell University. The constructivist perspective is rooted in the analysis of subjective experiences of food choice decisions (Sobal & Bisogni, 2009). Findings aim to represent how study participants construct their food related experiences. Thus the food choice process model developed by this group describes components, processes and factors influencing food choice, which were identified from emergent concepts grounded in participant's food choice perspectives (Furst, Connors, Bisogni, Sobal, & Falk, 1996). The model has guided a number of investigations of food choice, each one presenting a characterization, or conceptual representation, grounded in qualitative data. Food choices have been characterized as *coping strategies* developed by families to manage *spill-over* of work onto family life (Devine, Connors, Sobal, & Bisogni, 2003; Devine et al., 2006). Other characterizations from this group include: factors and process involved in managing adolescent food choices in families (Travis, Bisogni, & Ranzenhofer, 2010); food management skills and life course events (Bisogni, Jastran, Shen, & Devine, 2005); eating routines as a strategy to balance food values and family and work demands (Jastran, Bisogni, Sobal, Blake, & Devine, 2009); food choices as ways of expressing identity (Bisogni, Connors, Devine, & Sobal, 2002); and food choice schemas (Blake & Bisogni, 2003). This work has contributed to exploring food choice as processes integrated into social contexts. Rich descriptions have provided more evidence for the complexity of food choices interactions. In terms of theoretical contributions, however, this research program has not yet offered unifying concepts to theorize the relationship between food choice and context. Moreover, in modelling food choice as subjective experiences, descriptions rely on discursive food choice perspectives, placing emphasis on agency and rational decision

making. Nonetheless this research has demonstrated that food choice is a complex process that is best understood in social contexts.

Health lifestyles; a conceptual bridge to study eating patterns.

In public health the discussion of health-related lifestyles is primarily addressed as a set of discrete, health-related behaviours comprising an individual's profile. However, the original concept of lifestyle captured class relationships expressed in the styles of living which distinguished social status groups (Abel, Cockerham, & Niemann, 2000). Class lifestyles were explained by the interplay of people's *life choices* within their *life chances* understood as structured by class relations. Following the Weberian meaning of lifestyles, a group of theorists proposed appropriating health lifestyle as collective characteristics in order to explain how health inequalities are socially structured (Abel, et al., 2000; Calnan & Williams, 1991; Cockerham, 2005; Cockerham, Rütten, & Abel, 1997; Frohlich, et al., 2001; Williams, 2003). Drawing from modern theories of practice, lifestyles are re-framed as social practices, observable in day-to-day activities recognized as happening in structured social relations (Ortner, 1984). Social practice is conceptualized as a symbolic interplay of *agency* and *social structure*. Social structure comprises asymmetrical social relations underlying class but also those associated with gender, ethnicity, and age for example. Social practices are carried out by people through their agency, the notion for the capacity to make choices and have an impact in the social world. Thus action is constrained or enabled in relation to socially structured positions (social status, age, gender, ethnicity, etc) in interaction with agency.

These developments in health lifestyle have been used to theorize social context (Frohlich, et al., 2002; Poland et al., 2006). Collective Lifestyles is a framework that brings together notions of social practice, social structure and agency to define and theorize Collective Lifestyles as a relationship between people's situated activities; their social practices, and social structure (2002). The Collective Lifestyles framework was employed to study youth smoking as one practice from among others, such as buying tobacco products, the places where youth smoke and with whom they smoke. Smoking practices were not considered to be reactions to the social structure, but the recreation and reinforcement of the social structure, a feature of the dialogical structure-practice relationship (2002). Information from youth focus group discussions from eight territories demonstrated distinct collective lifestyles expressed in smoking practice variations by territory. Variations were explained by the different ways in which youth related to social rules and resources which configured their routine activities in which smoking practices were integrated. The conceptualization of Collective Lifestyles provides an interesting platform from which to study food choices re-framed as a social practice. Furthermore the Collective Lifestyles framework offers theoretical direction on how to approach the social context of food choice using concepts of social structure.

Sociological perspectives on the social organization of family feeding identify the dialogical relationship between food practices and the contexts in which these occur. This dialogical relationship offers a way to theorize the complex interactions between dietary behaviours and environment that have eluded nutrition researchers. Lifestyle theories, and in particular the collective lifestyles framework, furnishes concepts to examine this

reciprocal and interacting relationship by conceptualizing food and eating as social practice. Given the broad range of food related practices involved in daily living, food choice presents a useful focus. Food choice practices as the object of study are proposed since food selection is a central activity shaping the food people eat. Food selection also impacts upon nutritional health and is a key practice where agency has been overemphasized by current food choice models. The first article of the dissertation develops a framework using concepts of social practice, social structure and agency to examine food choices as social practices.

ARTICLE 1 - Food and eating as social practice – understanding eating patterns as social phenomena and implications for public health (reprint copy)

Treena Delormier, Katherine L Frohlich[1] & Louise Potvin[1]

Author Contributions: This is a theoretical article that required developing the ontological character of food and eating as social phenomena, and demonstrating how feeding practices in families are social processes that are both constructed by, and construct families. I proposed the original idea to frame food choices as social phenomena in order to understand family eating patterns as group characteristics. Working from Katherine Frohlich's development of the Collective Lifestyle's Framework, both Katherine Frohlich and Louise Potvin guided my work in operationalizing Giddens' concepts of social practice, agency and social structure to study family food choice practices. I developed the ideas linking the notion of social practices to family food choices and wrote the entire manuscript. The final version reflects a number of iterations reflecting discussions where my research supervisors provided essential guidance on strengthening the ideas developed in the paper. Co-author authorizations to include this article in the thesis are in appendix 6.

Title: Food and eating as social practice – understanding eating patterns as social phenomena and implications for public health

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SOCIOLOGY OF HEALTH & ILLNESS

Food and eating as social practice – understanding eating patterns as social phenomena and implications for public health

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Abstract Globally, public health agencies recognise obesity trends among populations as a priority. Explanations for population obesity patterns are linked to obesogenic environments and societal trends which encourage patterns of overeating and little physical activity. However, obesity prevention and nutrition intervention focus predominantly on changing individual level eating behaviours. Disappointingly, behaviour-based nutrition education approaches to changing population eating patterns have met with limited success. Sociological perspectives propose that underlying social relations can help explain collective food and eating patterns, and suggest an analysis of the sociocultural context for understanding population eating patterns. We propose a theoretical framework for the examination of eating patterns as social phenomena. Giddens' structuration theory, in particular his concept of social practices understood as an interplay of 'agency' and 'social structure' (rules and resources), is used to study food choice patterns. We discuss the application of these concepts for understanding routine food choice practices of families, elaborating how rules and resources configure the enabling or constraining conditions under which actors make food choices. The framework assists in characterising how social structural properties are integral to food choice practices, and could direct attention to these when considering nutrition interventions aimed at changing population eating patterns.

Introduction

Global trends of obesity continue to rise (WHO 2000). The urgency for public health to improve population nutritional status is of vital importance, given the central role that nutrition plays in health, and chronic disease and obesity prevention (Nishida *et al.* 2004). This is especially pertinent in childhood, during which time nutrition-related health problems often become established (Caballero 2001, Kelder *et al.* 1994, Tercyak and Tyc 2006). Childhood obesity is an identified, immediate priority, given the unrelenting increase in its prevalence worldwide (Koplan *et al.* 2006), a trend foretelling a future with generations of young adults burdened with diabetes, among other chronic conditions that compromise wellbeing (Dietz and Gortmaker 2001). World-wide, public health agencies at all levels are struggling to figure out how to deal with this mounting problem.

The obesity crisis has been linked to obesogenic environments and societal trends that encourage overeating and little physical activity (Sturm 2005a, 2005b, Swinburn *et al.* 1999). Preventing obesity, however, has predominantly focused on the behaviour of individuals (Nestle and Jacobson 2000). This is also true for nutrition education interventions. Generally, outcomes related to dietary behaviour change have been disappointing. A review of school-based, cardiovascular disease prevention programmes, which were comprehensive and well evaluated, achieved intended positive dietary behaviour outcomes at 34 per cent (effect ratio 34%) (Resnikow and Robinson 1997). While the promise of school-based nutrition education has tended to centre on improving elements of the intervention programme and evaluation processes (Perez-Rodrigo and Aranceta 2003, Perry 1999, Resnikow and Robinson 1997), questions have been raised regarding the adequacy of theories underlying these programmes.

Most population-based, nutrition and obesity prevention interventions have been theoretically based upon Social Cognitive Theory (Bandura 1986) and other models which aim to modify psychosocial characteristics of individuals such as knowledge, self-efficacy and attitudes (Contento 2007). Travers explains that psychological models of behaviour emphasise 'individualistic, behaviour change strategies [which] negates the role of the social context in shaping behaviour, and thus implies a separation of people and their environment' (1997: 58). Thus in most current approaches 'food, bodies and eating are disembodied and disengaged from the social contexts in which people live their lives' (Warin *et al.* 2007: 98).

Understanding how the social context, (social policy, environmental and sociocultural influences) affects health behaviour is identified as necessary for more powerful interventions (Calnan and Williams 1991, Cockerham 2005, Daykin 1993, Frohlich *et al.* 2001, Orleans 2000, Williams 2003). Specific reviews have addressed the determinants of healthy eating and support models which conceptualise population perspectives for improving nutrition (Kumanyika 2005, Raine 2005). Population perspectives acknowledge that the collective characteristics of a society and its norms greatly influence individual behaviour (Rose 1992). For example, it has been observed that when support, provided as part of clinical approaches for dietary behaviour change, is no longer available, people tend to fall back into their normal routine (Jeffrey 1989, Rose 1992). Deviation from normal routines requires continual efforts to sustain alternative behaviours and might help to explain why interventions based on individual behaviour change theories have achieved limited success when implemented in populations. Population approaches, on the other hand, acknowledge the integral role that normal routine plays in influencing behaviours and promote modification of that role by creating conditions to support altered patterns of eating for whole populations, not just for at-risk individuals (Rose 1992, Health Canada 2001). The relationship between social conditions and population eating patterns is acknowledged as important (Kumanyika 2001, Raine 2005); conceptual frameworks to study this relationship for public health, however, have not been developed. In this paper we take on the challenge of developing a truly population perspective by formulating a theoretical approach that attends to the relationship between the social context and food choices, and how this shapes eating patterns.

We first discuss limits of individual behaviour theories for addressing the social nature of eating. We then characterise eating as embedded in social relations and propose to study eating as a social practice. Using Giddens' theory of structuration, specifically the concepts of social practice, the duality of social structure, and agency (Giddens 1984), we examine social structural conditions and their relationship to the practice of family feeding. This theoretical framework is proposed as one tool to understand population eating patterns

and to guide health promotion interventions aiming to modify social structural conditions and thus improving population-level food and eating patterns.

Eating as behaviour versus eating as a social practice

Patricia Crotty wrote that 'the act of swallowing divides nutrition's "two cultures", the post swallowing world of biology, physiology, biochemistry and pathology, and the pre-swallowing domain of behaviour, culture, society and experience' (1993: 109). She offers this to help explain her observation that nutrition gives limited attention to the pre-swallowing, or the social nature of food and eating. Nutrition, as a scientific discipline that studies nutrient requirements for the optimal functioning of the body, regards food and eating as the means by which nutrients are delivered to the biological system. Fields that address the application of nutrition science, such as public health nutrition, home economics and dietetics, are concerned with eating behaviour, but remain heavily preoccupied with its impact on nutrition. For example, nutrition counsellors aim to modify their clients' eating behaviours as a means for improving nutrient intakes. Similar to theoretical approaches that underlie nutrition counselling, dietary change interventions for populations have been founded on social-psychological theories for understanding individual dietary behaviour (Baranowski *et al.* 1999). These theories, such as the theory of reasoned action (Montano *et al.* 1997), social cognitive theory (Bandura 1986), and the transtheoretical model (Prochaska and DiClemente 1982), are used to explain individual food choices and other dietary behaviours. In behavioural models the individual is conceived as rationally deciding her fate in response to multiple influences acting upon her. Researchers using this approach have elaborated extensive lists of social and physical environmental influences, as well as psychosocial characteristics of individuals, that correlate with various eating behaviours (Murcott 1995). The most important limitation of studying eating strictly as a behaviour under the control of an individual, is that it exaggerates the extent to which rational choice drives what people choose to eat, and underestimates the extent to which eating is embedded in the flow of day-to-day life. People's eating patterns form in relation to other people, alongside everyday activities that take place in family groups, work and school. Eating does involve isolated choice, but it is choice conditioned by the context in which it occurs. Social theory provides theoretical guidance for studying the social nature of eating, approaching eating as integrally linked to context.

Sociological and social anthropological studies of food have characteristically focused on food cultures and the collective character of eating patterns among social groups (Douglas 1984, Murcott 1988). In contrast to behavioural approaches, sociological approaches study group eating patterns and aim to explain patterns in relation to their sociocultural contexts (Mennell *et al.* 1993, Murcott 1995). In these fields, theoretical orientations for explaining collective eating patterns have emphasised cultural and symbolic expressions of food use, where eating patterns are understood to reflect systems of meaning constructed by people, while other theories have emphasised materialist orientations presenting social, economic and political conditions as central in explaining group eating patterns. Theoretical approaches that address both the meanings of food and the material aspects of food to explain eating patterns of groups of people are important, but require adequate theoretical approaches to integrate them (Murcott 1995).

Investigating social relations as the basis for understanding eating patterns is a promising route for meeting this theoretical challenge (Murcott 1995, Travers 1996). Social relations as organised or structured social processes constitute the basis for understanding the social

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world. The social context can be understood as 'the local configuration of social relations which are comprised of social structures such as class, race, and gender; institutional practices, collective and individual behaviour, and intersecting personal biographies' (Poland *et al.* 2006: 60). Eating patterns that are characteristic of different groups of people can be understood as being embedded in configurations of social relations and being shaped distinctively by them. For example, eating patterns observed in a community of Indigenous people situated on reserve lands in the Canadian province of Québec, are reflective of the social relations underlying the political, economic and meaning systems of that place[1]. Using social relations as a basis for understanding and explaining eating patterns as social processes, accommodates both symbolic and material possibilities as well as cultural and material conditions which have generally been examined separately by food anthropologists and food sociologists respectively (Murcott 1988). By examining eating as social practice, we have a conceptual entry point for apprehending the underlying social relations which connect people in the social world, and which, we propose, generate population eating patterns.

To develop a theoretical framework for the investigation of eating as social practice, we turn to social theory. The third revolution of public health recognises health as a social phenomenon as well as a biological and psychological one (Breslow 1999). This encourages a dialogue with the social sciences, in particular a consideration of theoretical understanding of the world and how this shapes human action (Potvin *et al.* 2005). In conceptualising eating as a social practice we turn to social theory to develop a conceptual framework.

Giddens' structuration theory and concept of social practices

To develop the conceptual framework for examining eating as a social practice, we borrow some of the notions developed by sociologist Anthony Giddens (1979, 1984). Giddens' structuration theory proposes an ontology of social action that addresses a fundamental dualism in social theory. The dualism refers to two distinct orientations for the explanation of social life, that is, either the product of actor's voluntary action (agency), or as a product of structure (social processes) determining agency. Giddens' theory of structuration involves reconceptualising this dualism as a 'duality', symbolising agency (voluntary action) and structure (rules and resources) in a reciprocal relationship where neither structure nor agency can exist independently (Hardcastle *et al.* 2005). '. . . Social practices, biting into space and time, are considered to be at the root of the constitution of both subject (agent) and social object (society)' (Giddens 1984: xxii). Thus, social practice defined as the situated activities of social actors which happen in the flow of daily life or in context, integrates the concepts of agency and social structure. Social practices are skilful procedures, methods or techniques that are appropriately performed by social agents (Giddens 1984). Furthermore, we are concerned with routinised social practices, that is, the enduring patterns of social practices that constitute social systems. Social structure, as 'rules and resources' which actors draw upon during practice, creates the conditions of practice that are always both constraining and enabling (Giddens 1984: 25). The social structure, therefore, does not determine individual action; it is enacted and reified by people through the choices they make during social practice, and people, through their social practices, reinforce or possibly change the social structure. This is what Giddens develops as the 'duality of structure' where structures are both the medium and the outcome of social practice. Agency reflects the capacity for actors to intervene in the world and to influence a specific process or state of affairs (Giddens 1984: 14). Agency can be

thought of as the capacity to act. One should consider this capacity, however, as being limited by structural constraints which come about through the agency/structure interplay. This interplay refers to the conceptualisation of social practice as the intersection of agency and social structure. Individuals, while oriented to act in ways that are practical and appropriate, do not just react to social structural constraints, but interact via their agency, in a range of socially structured conditions.

Developing a socially relevant conceptual framework for studying and intervening on eating patterns involves operationalising Giddens' concepts of social structure, agency and social practices. In his articulation of structuration theory, Giddens gives priority to the ontology of society and has been criticised for not developing issues of epistemology and methodology (Stones 2005). Thus, structuration theory can be challenging to use in empirical work, requiring refinement of some of structuration theory's basic concepts to provide useful direction for studies of structuration (Stones 2005). Giddens (1984) outlines two methodological bracketing approaches to assist in social analysis: strategic conduct analysis, which concentrates on agents and how they reflexively monitor what they do, while holding in suspension (bracketing) the social context, and institutional analysis, which analyses social structural influences. Giddens' institutional analysis is criticised for its absence of the agent. Stones (2005), however, refines a more analytically useful institutional analysis as *strategic context analysis*[2]. Strategic context analysis brings the agent in by accounting for an agent's knowledgeablity, meaning the agent's understanding of herself, and her social context (Giddens 1979: 72). In 'bracketing' the agent's knowledgeability we recognise and suspend the agent's frame of reference to examine the strategic terrain constituting constraints and possibilities for action (Stones 1991). Strategic context analysis outlines a methodological analytical strategy useful in our study concerned with family feeding practices by developing Giddens' ontological concepts of social structure at a level where they can be applied to analyse the rules and resources that shape this terrain for agents who interact within it.

Our intent is to use concepts of social structure, agency and social practice for studying families, food and eating as a domain of activities. We discuss family feeding next by briefly reviewing research conducted on food and families. The social relational aspects of food and families are highlighted.

Food and eating in families

Charles and Kerr studied food, women and families for the ways in which 'eating habits are fundamentally influenced, if not determined, by social factors such as gender, age and class' (1988: 1). While being heavily deterministic, this statement explicitly considers social stratification systems (*e.g.* age, class, and gender) and ideologies (*e.g.* family ideology) as being produced, and reproduced, through the social processes created when people live their daily lives (Bernardes 1985). DeVault's research, which examines feeding the family as 'an activity and not as an image or an emotion' (1991: 1), explicates the social organisation of women's caring work. Her approach has shed light upon the ways in which caring is constructed as women's work, emphasising women's participation in social relations, in particular, prevailing relations of inequality. DeVault's work supports the notion that families are created through relationships involving food and that feeding a family is an activity central to family life. Research into the nutrition inequities experienced by women on social assistance has explored ways through which women's family feeding practices reinforce the social order (understood to be constituted in social processes), and provided explanations

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for the constraints of feeding families (Power 1999, Travers 1996). These studies of food and families show that daily recurrent practices characterising routine family feeding can be examined for the ways in which they symbolise, reinforce and reproduce social relations and divisions. The ways in which people feed their families occur in a network of social relationships which involve, and go beyond, the individual and the household. Research on adolescent eating practices, for example, from both parent and adolescent perspectives has shown that eating practices are deeply embedded in the contexts of home and school as well as relationships with parents and peers (Backett-Milburn *et al*. 2006, Wills *et al*. 2005). As such, consideration for how feeding a family impacts on the health or nutrition of families, or specific family members, must include an exploration of these relationships and how they configure family feeding practices (Gregory 2005).

Methodologically these studies identify family feeding as lived experiences which require investigation into the situated family feeding activities of people. Such activities are conducted in material settings and involve processes that give meaning to everyday lives (DeVault 1991). The examination of daily food-related activities such as procuring food for the family, preparing food, making meals and cleaning up, are a key empirical basis for studying family feeding activities. We are further reminded to pay close attention to the 'invisible' nature of family feeding, that is, the tacit understandings involved in the ongoing planning and organisation, as well as the skills involved in monitoring household food supplies and co-ordinating food preparation. These activities, due to their second-nature quality, are challenging for informants to articulate.

Thus far, we have discussed feeding a family as a set of food-related social practices occurring among family groupings. The relevance of studying family feeding for public health stems from the recognition of family as a key social environment and material setting for child development of eating patterns and food preferences (Campbell and Crawford 2001, Covenay 2002, Crockett and Sims 1995, Nicklas *et al*. 2001, Taylor *et al*. 2005). We recognise that social categories used to study families vary, change and hold different meanings (Beck and Beck-Gernsheim 2004). For our purposes, families are social groups constituted in the routine and shared patterns of social practices enacted by those who participate in them. Following Giddens' perspective, families are social systems. Due to their enduring nature over large stretches of time, families are considered institutions (Giddens 1984: 17). Families are rooted in the patterns of social practices that are continually reinforcing the family institution (Morgan 1996). Practically speaking these could be patterns of cohabitation, caring and sharing food. We do not define families by the presence of certain people in the social group. Nor are families taken as a unit of analysis. Rather, families are considered here to be a domain of social practices through which family feeding flows. Family feeding practices are the set of food-related social practices that take place in social groupings whose enduring practice patterns characterise its participants and their interactions as families.

From among the scope of possible family feeding practices including obtaining food, preparing and consuming food, we focus on practices involving food choice. Food choices involve the selection of food items. The conditions of food choices are structured by 'rules and resources' limiting the range of options. Agents acting in this terrain of food choice decide, guided by their frame of reference, in other words their knowledgeability (skills, beliefs, experiences), what is most adequate at the moment of food choice. Food choice practices are part of the landscape of family feeding practices. From the practice perspective food choice practices are relevant targets for public health nutrition efforts invested in changing food selection patterns. For empirical work the emphasis on food choice practices from among family feeding practices focuses the analysis on food selection. The analysis

of social practices involved in food selection can be examined for variations along different dimensions, for example healthfulness of food choice, convenience of food choice, etc.

Structuration of family food choice practices

Social structure for Giddens is distinguished as two aspects of rules – codes of conduct (normative elements) and codes of signification (meaning), as well as two kinds of resources: allocative and authoritative. Rules and resources (social structure) are linked to social interaction via *modalities* which are interpretive schemes, norms and facility (Figure 1). Furthermore Giddens distinguishes *structures* of signification, domination and legitimation (Figure 1) as existing as knowledgeability in memory traces, and having a phenomenological dimension, from the ways (modalities) in which agents draw from these structures (of signification, domination and legitimation) which leads us to their external dimension (Stones 2005: 122). We focus on modalities and structures when analysing social practices. Structures of signification are the interpretive schemes that allow people to communicate and share understandings during social interactions (Kechidi 2005). Meanings are communicated and interpreted through food choice practices, for example, referring to 'healthy' or 'junk' food characterises food categories that convey health-related properties which stem from signification structures or meanings related to discourses about food and health in society. Social structures, through interpretive schemes, shape food choice practices; for example, food practices categorised as 'traditional' come to hold meanings which are distinguished from food practices involving store bought foods. (Delormier and Kuhnlein 1999). Evidence of how social structure is linked to food choice practice has been demonstrated through the study of food/health relationships expressed by different social groups. Coveney (2004)
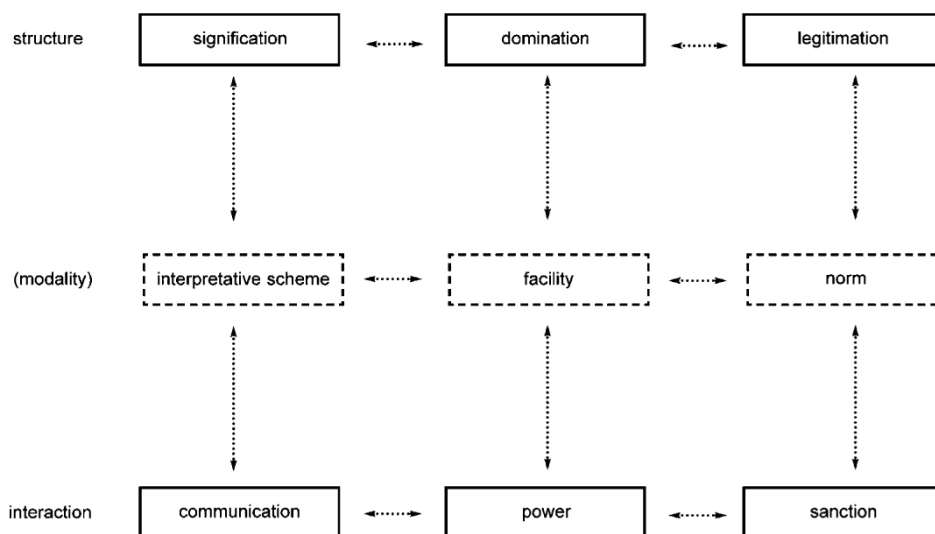
Figure 1 *Representation of Structuration Theory: Modalities linking social structures with social inter-action (adapted from Giddens, 1984)*

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examined lay knowledge and showed how meanings of food and health involved in decision making around feeding children differed among social classes. Working class families tended to express health and food in terms of the outward appearance and functional capacity of children, whereas the tendency in middle class families was to express this relationship in scientific and nutrition informed terms. Interpretive schemes expressed in food choice patterns assist in identifying structures of signification that come into play during social interaction related to family food choices.

Considering conduct rules, or structures of legitimation, Giddens elaborates these as rights and obligations sanctioned or rewarded during interactions (Giddens 1979: 86). Sanctions involved in social interactions are enacted via the modality of norms. In families for example, food choice practices that centre on sharing food at family meal times can reveal legitimation structures related to ideals of families eating together and the expectations associated with roles of being a mother or family food preparer. In a study of food choice coping strategies, low-wage employed parents tried to uphold the social ideals of the family meal where members eat together at home, despite being faced with daily demands that competed for their time and energy in being able to accomplish their motives for family meals (Devine *et al*. 2006). Food choice practices illuminate the social structures of legitimation expressed as norms related to particular family feeding practices. Signification and legitimation structures are the social rules which combine with agency, enable or constrain agency during social practice, and can explain how patterns of food choice practices are reinforced. Resources are also implicated since they provide the capacity for social actors to get things done.

The exercise of power relates to structures of domination associated with allocative and authoritative resources. Structures of domination convey a transformative capacity to social actors when they draw upon power resources (via the facility modality) during practice (Figure 1). Authoritative resources relate to capacities such as communication skills, interpersonal connections and organisation of time and space which allow the exercise of power in relation to others. During family feeding, decision making power for what family members eat is an authoritative resource conferring onto actors the capacity to make food choices for family members or limiting this power when resources are lacking. Allocative resources are the material objects over which agents command control in order to get things done. The conditions of family feeding practice are structured by access to allocative resources such as money to buy food, grocery stores, land to plant food, equipment to hunt, or transportation to access grocery stores. The structuration analysis of family feeding practices takes into account that social actors draw from both authoritative and allocative resources in specific structural contexts to accomplish family feeding. Constraints may arise when resources are lacking; for example, when a person's capacity for choosing and preparing food is limited in relation to family members whose food preferences are impossible to please. On the other hand, food choice conditions may be enabled when adequate money, transportation and food retail outlets are easily available and time to acquire food does not compete with other activities (*e.g.* child-care, employment, or volunteering).

In the structuration of social systems and institutions, resources of authority and allocation are drawn upon in conjunction with their normative and signifying aspects (Giddens 1979: 107). Exclusively in analysis are we able to separate structural properties of social practices into rules and resources in relation to specific interactions. People in their day-to-day continuous flow of interactions combine rules and resources in different ways to accomplish different ends; this enables agency for some and constrains agency for others (Giddens 1984: 310).

Applying the theoretical framework to study feeding practices

We developed this conceptual framework as a tool to gain insights into constraints and opportunities concerning family food choice practices by examining the social structure as rules and resources. To demonstrate the operationalisation concerning our approach, we discuss some findings from published empirical work and reframe them using the concepts from our framework. Wills and colleagues' (2005) sociological study is selected since they aimed to examine youth eating practices and the school context in which they are embedded in order to understand observed eating patterns of youth. This fascinating and informative study shares our understanding of eating patterns as embedded in social processes and is thus relevant to use as an example. The findings characterise *influences* on food choices related to: 1) the organisational structures of schools, 2) youth priorities of food in relation to non-food activities and 3) peer influences on food and eating practices (Wills *et al*. 2005). Using concepts from our framework, we reframe influences to show an example of how rules (meanings and norms) and resources (authoritative and allocative) can be understood as being drawn upon during food-choice practices. We also show how rules and resources constitute the constraining or enabling conditions which recursively reinforce food choice practices into eating patterns.

In the study of youth eating practices at school, routine eating practices differed among groups of students and could be explained by how these groups interacted differently with the rules and resources of the school context. For example, girls tended to 'hang out' and do activities during which they could also eat. Boys tended to do physical activities which meant eating quickly or skipping food altogether. In general, the meanings of eating at lunchtime held less significance in relation to other activities. However, what was meaningful during lunchtime varied by gender and gave rise to distinct food-choice practices. Peer group norms shaped food choice patterns such that youth who ate with friends at school, or who participated with peers in organised club activities at lunch, made choices according to peer-group decisions. Another group of students was excluded from lunch at school by deciding to go home at lunch, or by escaping the school to eat elsewhere, explaining that school held no enjoyment at lunchtime. The power associated with authority and material resources for youth to decide what, when and where to eat was significantly limited in relation to the school's authority. Groups of students with the resources to buy lunch could leave the school to eat, others who relied on the free school lunch programme did not have this power. From the youth's perspectives, the meanings (rules) of eating at school break times and its low importance alongside free-time activities, the peer-group norms (rules) of inclusion, and exclusion, norms (rules) of the dining facilities at school, the lack of power (resources) to make desired food choices within the dining facilities, and lack of adequate money (resources) created constraints that frustrated students at school. Opportunities to eat elsewhere depended on having financial resources, access to food services with less queuing time (often fast food) and being able to go home.

Variations in patterns of food choice distinguished and characterised groups of students. This is evidence that student populations are diverse, and that the different food choice patterns observed could be related to the combinations of rules and resources which configured conditions differently for groups of students. Rules and resources combined in configurations which were experienced by a group of students as constraining conditions of food choices driving them to make food choices away from school. Another group of students involved in activities at lunch were constrained by time limitations. However, peer group norms which limited their food choice practices to brown bag lunches also shaped patterns of eating together which reinforced group belonging.

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The implications for nutrition interventions lie in addressing ways in which rules and resources create opportunities for youth to make healthy food choices the attractive and easy ones. Thus, assessing the power resources students have in making food choices that do not frustrate time constraints at break times should be considered. Appreciating the powerful impact of peer norms and norms derived from school policies must be addressed for the ways in which they reinforce particular food choice patterns. As discussed by Wills *et al.* (2005), the perspectives of youth provide the logic of their food choice practices so that youth participation in interventions may offer meaningful and useful solutions for creating opportunities for positive food choices. For public health, knowledge to inform nutrition interventions must take into consideration the perspectives and lived experiences of different population groups.

Studying food choice practices implies studying eating routines and identifying food choice patterns characteristic of population groups. In public health efforts to develop population perspectives to change eating patterns could start by identifying dominant food choice patterns as an important object of study, and then by exploring eating patterns in a relationship with the context that constrains or enables food choices into certain configurations. For example, patterns of low nutritional quality convenience food put into their children's lunches might be shaped within constraints experienced by employed mothers in preparing more nutritious food from scratch. Thus, interventions might attend to the conditions created by employment, the norms that support women as predominantly responsible for children's food choices, and the food meanings that are expressed when children open their lunch box among their peers. Interventions that focus on conditions illuminate the shortcomings associated with efforts that traditionally have targeted mothers with nutrition education (Travers 1997).

Current policies for public health action on nutrition and obesity prevention identify the importance of environments in shaping dietary behaviours (Lang and Heasman 2004). Nutrition-education approaches with a health-promotion perspective emphasise ecological approaches which target both environments and individuals. These policies and approaches, however, could progress by building from theoretically based approaches, like the one that we propose here, that explicitly identifies the relationship between context and food choice practices. Efforts aimed at environments or individuals would thus go a step further and conceive individuals and environments in a recursive relationship. The recursive relationship of rules and resources, and food choice practices that we propose assists in directing an examination of how meanings, norms and power structure the conditions that reproduce and reinforce patterns of food choices into observable forms. Efforts would then endeavour to take action that would configure conditions that need to be created to enable healthy food choice patterns. This knowledge has the potential to create opportunities for making healthy food choices meaningful, socially acceptable and facilitated through adequate resources, hence promoting healthy patterns of food choice practices.

While a better account of how food choice practice patterns form in relationship to context is promising for the future of nutrition interventions, we must appreciate the complexity related to what people choose to eat. Food is essential to survival. The myriad ways in which people acquire and eat food are reminders of the complex social qualities of food and eating, a fact which will continue to challenge researchers who study eating patterns.

Conclusion

In this paper we argue that aspects of the social context are integral in shaping food and eating patterns of population groups and that social context needs to be addressed in

addition to individual choice. Public health lacks theoretical frameworks to guide our understanding of population eating patterns as integrally related to context. We describe a theoretical framework using Giddens' theory of structuration to conceptualise eating as a social practice. Structuration analysis of food choice practices can provide insights into how the social structure, understood as rules and resources, constrains and enables family food choice. This perspective could guide nutrition interventions by offering a way to understand how rules and resources of society structure opportunities or constraints shaping population food choice patterns.

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Notes

1   In this example the United Nations definition is implied when referring to Indigenous peoples living in the community. Under Canadian law, and outlined in the Canadian Indian Act, 'reserve lands' refer to land allotted to 'Indians' under the management of the Canadian Minister of Indian and Northern Affairs (Government of Canada 1985).
2   Working from critiques of Giddens' ontology of social structure, Rob Stones makes the case that it is entirely possible to conceive of social structure that pre-exists interaction, as external (to agents) structure and internal to agents, existing in their memory traces and drawn upon in the moments of interaction. This partitioned conceptualisation of social structure brings agents into strategic context analysis by linking the social structure that exists internally in agents (Stones 2005: 122).

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METHODS

Research Propositions

Research propositions for the empirical demonstration of the Food Choice Practice Framework

The first article delineated the conceptual framework adapted from Giddens' structuration theory to investigate food choice as a social practice. The empirical work that follows was designed to demonstrate the contours of food choice practices through an investigation of food choices in families with young children. Two empirical studies serve to demonstrate how the proposed theoretical concepts operate in the context of family feeding.

The first study proposed that food choice practices are a set of patterns within a family's activities. Furthermore, it was expected that the recursive relationship between agency and social structure would be identifiable as the intentions of family members within the contextual features of family food choice routines. The study sought to answer, "What are the routine patterns of family food choice in families with young children?"

The second study investigated the proposition that rules and resources are structuring features of food choice practices. The study objectives were to first identify then operationalize rules and resources involved in family food choice practices. Secondly, the study objectives were to demonstrate the *structuration* of one routine food choice practice, previously described in the first study, which centred on creating meals and snacks. The study specifically sought to demonstrate how rules and resource structures constrain or enable routine food choice practices.

The Research Strategy

Research Design

The research was designed to investigate food choices as they normally occur in families, as well as to undertake a systematic analysis of the social structuring of food choices in families. If food choices are a social practice as the conceptual framework proposes, then we should be able to empirically demonstrate their proposed structuring features.

The empirical investigation required a qualitative research approach. Qualitative approaches permit researchers to investigate phenomena within its context. "The social context of food behaviour and in particular, aspects of domestic life and the social forces which shape these" can be appropriately addressed by qualitative research (Crotty, 1993, p. 115). This perspective is needed to inform nutrition policy which tends to neglect the social realities of nutritional problems. Qualitative research permits the researcher to gain an 'insider's perspective' on diet and nutrition-related social phenomena, such as domestic food provisioning, or the experience of adopting dietary changes (1993). Studying family food practices involves in-depth exploration of the diverse experiences and household processes through which family members negotiate daily lives (Gregory, 1995). Thus, a qualitative approach to explore family food choices practices was used.

The study was designed to comprise a diverse sample of families, each representing a distinct food choice system. The design resembled a case study strategy whose purpose is developing better understandings of contextualized contemporary phenomenon (Yin, 1994).

Thus, this case study was designed to study contemporary food choices practices integrated within family social systems, with each family representing an individual case. A *family food choice system* was defined as the typical food-related activities constituting each family and in which food choices were carried out. The study was conducted in one geographic and cultural community. The research sought evidence from multiple families to describe how family food choices could be characterized as social practice according to theories of practice.

The case study data was comprised of qualitative data generated from a series of interviews with one key informant from each family. A key informant was defined as the person who self-identified as being primarily responsible for feeding the family. In this study, all key informants happened to be women. Particular attention was placed on food choices involving children, as better understandings of children's food choices were sought for informing family-focused nutrition programs in the study community.

Background - The Research Context

This research project was developed within the Kahnawake Schools Diabetes Prevention Project (KSDPP). The KSDPP is a research and intervention project whose goal is diabetes prevention in one Indigenous community. The project is based in Kahnawake, a *Kanien'kehá:ka* (People of the Flint - usage synonymous with *Mohawk*) community (Alfred, 1995) of approximately 7,500 people in 2007, located 15 km south from the Montreal urban centre, in Québec, Canada.

In 1985, 12 percent of adults in Kahnawake, aged 45 to 64 years, had documented Type 2 diabetes, twice the rate of the entire Canadian population of this same age demographic (Montour & Macaulay, 1985). At that time, the prevalence rate of cardiovascular complications among those with diabetes had been estimated at 48%, the highest documented in any Aboriginal community in Canada (Macaulay, Montour, & Adelson, 1988). The results from these studies, and perceptions of increasing obesity among children, prompted requests from community elders for diabetes prevention programs that focused on children, their families, as well as the entire community (Bisset, Cargo, Delormier, Macaulay, & Potvin, 2004; Montour & Macaulay, 1988). A recent study estimated Type 2 diabetes prevalence rates in Kahnawake as being between the national Aboriginal and Canadian general population rates, with incidence rates and gender ratios closer to the Canadian general population (Horn et al., 2007). The prevention of Type 2 diabetes and its management continue to be a significant health priority for the community.

The KSDPP was originally developed as a three-year intervention and community-based, participatory research project (Macaulay, et al., 1997). In 2000, the KSDPP received funding to develop a research and training centre which included objectives to train students in Aboriginal health research. Within this training environment, I had the opportunity to conduct a research project with the KSDPP, as well as pursue a degree in the public health doctoral program at Université de Montréal.

The research questions for this study stemmed from a synthesis of a series of evaluations of school-based intervention programs from 1994 through 2002. The synthesis concluded that many of the early positive changes in body mass index, nutrition, physical

activity, and television viewing observed at the beginning of the project were not maintained. Most troubling was the increase in the proportion of children who were classified as overweight and at risk of being overweight (Paradis et al., 2005). Interpretations of these results by community members identified the need to intervene earlier by focusing on preschool children and their families. Among other goals, this research project was designed to contribute knowledge on intervention programs which target family food choice patterns that focused on preschool aged children.

The Study Community – Kahnawake

The traditional lands of the *Kanien'kehá:ka* (the People of the Flint = Mohawk) reached to the north of the island of Montreal and south to the Mohawk River Valley. The *Kanien'kehá:ka* controlled and occupied their lands throughout history. Their land base was vast and diverse. It was a place where people planted crops, hunted, fished, trapped, gathered food and generally prospered. After European contact and subsequent alliances and treaties entered into with the Dutch, French and English, their traditional lands, and way of life were transformed (Alfred, 1995; Mohawk Council of Kahnawake, 2004).

The village of *Kahnawake* (by the rapids) was settled in 1716 at it's present day site after moving four times from *Kentake*, settled around 1677, the place of present day LaPrairie, Quebec. Kahnawake was settled on the Seigneury of Sault St. Louis. *Seigneuries* were part of the French land tenure system of allotting lands to *seigneurs*, in this case Jesuits, to be conceded to settlers. However, the Seignuery of Sault St. Louis came with unique conditions as a land grant set aside for the exclusive use and occupation of the Iroquois of the Sault, of which the Mohawk were a part. Despite having these special

conditions, the Jesuits began conceding the lands in 1703. Over time more than two thirds of the land was conceded or lost in inaccurate boundary setting. Today the land base of Kahnawake encompasses less than 13000 acres (Mohawk Council of Kahnawake, 2004) and has the status of a federal Indian reserve under the Canadian Indian Act ("Indian Act," 1985).

The *Kanien'kehá:ka* of the Kahnawake, share a historical struggle to maintain their traditional identity and culture. Within the community are extensive family ties; the matrilineal organization of traditional *Kanien'kehá:ka* society emphasizes the significance of women in families that are organized by clans. Families are recognized as key social systems that shape the well-being of the community. Culturally, children hold significance as carriers of future *Kanien'kehá:ka* generations.

The Mohawk Council of Kahnawake exercises delegation of authority under the Indian Act to manage programs and services in the area of governance, justice, policing, education, health and social services, as well as economic development. However Kahnawake is also a community with a strong history of asserting distinct nationhood, culture, and identity (Alfred, 1995).

The community has, and continues to witness, segments of the population leaving to pursue work or study for extended periods of time in Canada and the United States. It sits in close proximity to a major metropolitan centre, providing access to urban socio-cultural and economic life. Though the people of Kahnawake share much culture and history, they are a diverse population with respect to educational background, income level, occupation,

religious affiliation, political affiliation, and languages spoken (Kahnawake Economic Development Commission, 2003).

Services and Programs for Families with Young Children in Kahnawake

In terms of programs and services provided to families and children in Kahnawake, the community has an early learning centre offering daycare services for children ages two to five years old. There are also two private day care centres in the community. Preschool is offered at two independent alternative schools, the Kariwanoron School and The Indian Way School, whose curricula are based on indigenous models of education. In addition to educational and child care services, there is a community health unit which provides prenatal care, a well-baby clinic, breastfeeding support groups and pre-conceptional health promotion programs. The community's family centre offers parenting programs in collaboration with social services to support families receiving these services.

A nutrition program administered within the local Kateri Memorial Hospital Centre, Department of Dietetics provides nutrition-focused health promotion programs within the community. The team of nutritionists collaborate with local schools, the community health unit, family centre and other community organizations, and is a key collaborator with KSDPP. Additionally the nutrition program has created independent programs, such as the longstanding Raising Healthy Eaters Program for families with young children. Working closely with the community, the nutrition team has many years of experience responding in a timely manner to nutrition issues in the community.

Food Access

The territory of Kahnawake is crossed by a railway which cuts through the reserve to access the train bridge located in Kahnawake and spanning the St. Lawrence River. Hydroelectric towers carry power lines across the community from the north. The Honoré Mercier Bridge's south access sits on the reserve and is accessed by provincial Highways 132 and 138 which cross the reserve to the northeast and south respectively. The bridge is one of the four bridges that provide access to the island of Montreal from the south shore. The development of the St. Lawrence Seaway along Kahnawake 's riverfront from 1954 to 1959 severed access to the River, and expropriated 1, 262 acres from the community's land base. Much of the expropriated lands were used for farming, and more farmland was destroyed by the excavated soil that was left on farmland which bordered the development site. These developments, all imposed by provincial and federal agencies, are historically significant in terms of Indigenous governance and shaping the ways in which the community accesses its food. The community previously had a number of farms; most families had a household garden, small game were hunted and trapped and people fished in the St. Lawrence River. The train and car bridges, highways and power lines, and in particular the construction of the Seaway effectively reduced the amount of land that could be used for agriculture, hunting and access to the river for fishing. However, transportation links to neighbouring municipalities now provide access to food markets and local farmers.

A number of major supermarket chains are located near shopping centres in neighbouring towns of Chateauguay, St. Constant, LaSalle, and Lachine. Shopping areas also provide access to popular fast food restaurants (eg. McDonald's, Burger King,

PizzaHut, Wendy's, Subway), independent fast food restaurants, full service restaurants, food courts within shopping malls and food service delivery. Most shopping centres are located within 2 to 15 km from the borders of Kahnawake. It is necessary to have a vehicle or other means of personal transportation in order to access shopping areas due to limited access to public transit. There is one bus which passes through the village area of the community and travels directly to the nearest subway station in Montreal. Bus service is impractical for grocery shopping and is used primarily by students attending post secondary schools and those employed on the island of Montreal, as well as by non-residents employed within the community. The bus is rarely used by families or people with children. As a user of the bus service, the few women I witnessed taking the bus with a child struggled to board with their strollers and belongings, particularly in winter.

Within the community there are food services as well as two small grocery stores. The food service sector changes often. Over the period of time of this study, two popular restaurants closed and one burned, neither has reopened; at least six new restaurants and cafés have opened in the meantime. Approximately 15 neighbourhood convenience stores dot the reserve that sell milk, bread, grocery items, general items, and snacks.

General services provided in the community are: banking services through the Caisse Populaire Desjardins, a cooperatively owned financial institution in Quebec; a Canada Post outlet; a hospital with long term care, primary care and treatment services; four primary schools and one high school; a small library; a theatre; a walking path; an ice rink arena; a skate park; and a youth recreation centre with a weight room and gymnasium. The community operates its own police force, fire brigade, ambulance and conservation

services. There are United Church, Catholic and Protestant Churches. There are three longhouse buildings which are locations where traditional *Haudenosaunee* (Iroquois) ceremonies and social events take place.

The Study Population

The study population is comprised of families residing in the Kahnawake territory with a child between the ages of three to five years who had not yet begun primary school in 2005. Using the birth rate for Kahnawake from the year 2001 and 2002, we estimated that there was approximately 150 preschool children in the community. The data assume that each birth could be attributed to one family, resulting in a proximate pool of 150 families with preschool children. However, due to a small percentage of multiple or closely spaced births, and a small number of families who did not reside in the community, we have chosen a conservative estimate of 125 families who represent the population from which the study sample was selected.

Recruiting the Sample of Families

We selected 20 families from the pool of families gathered from the study population. The number of families selected was based on studies that used a similar methodology to study family food practices (DeVault, 1991; Warde & Martens, 2000). These studies interviewed 33 families and 30 households and took place in cities with populations greater than 100,000 people. The study sample was assembled using purposive sampling with the objectives of a range of diverse families (Patton, 1990) and proceeded as follows. Assembling a diverse group of families was achieved by selecting families from

those who replied to the study recruitment invitation. Identifying selected families was accomplished with the assistance of a community member familiar with the families who reside in Kahnawake. Each family was selected to represent varied parenting structures (one parent, two parent or 'blended' families where two sets of parents care for children), age of parents, number of children in the family and socioeconomic status based on income and education level. These criteria represent factors that influence variation in family dietary practices (Roos, Lahelma, Virtanen, Prättälä, & Pietinen, 1998; Turrell, Hewitt, Patterson, Oldenburg, & Gould, 2002). These were also characteristics that community members identified as making up the diverse families in Kahnawake.

Recruitment began by sending invitations (Appendix 1) home with all of the children attending three of the four primary schools in the study community, children attending the early learning and daycare center and the community family center. Prior to sending invitations to families through their respective schools, permission was sought from either the parent-directed school committee or the school director. Concerning the Early Learning Center and the Family Center, the directors of both organizations gave permission.

The invitation explained the purpose of the study, the criteria for participation and described what study participation involved. Compensation for each family was set at thirty dollars' worth of groceries for their participation. Those interested were asked to return the invitation with their name and telephone number, or to contact myself by telephone at KSDPP. From this initial recruitment, 34 positive replies to our invitations were collected from the schools and daycare. From this list, nine families were interviewed for the study.

The list of respondents compiled from the first invitations was reviewed by a KSDPP Intervention Coordinator who knew most of the families in the study community. Given the small size of the community, her experience as an educator and knowledge of family histories, she was able to assist in identifying the families who could meet criteria for a sample of diverse families.

Initial respondents tended to represent families with available time and interest in participation. For example, a number of the respondents were regular participants in KSDPP's community and school activities. They also tended to be mothers who were in their mid- to late 30's. To further diversify our pool of potential participants, we identified a number of families whose children attended the daycare and early learning centre. In this second stage of recruitment, we searched for families with young parents, families with more than two children, those who consisted of 'blended' families, or single parent families. The director of the early learning and day care center approved recruiting through classroom educators who delivered invitations directly to those identified parents. Educators were helpful in offering suggestions for potential study participants based on their experience working with the children and their families. Seventeen additional families accepted the invitation to participate through their child's teacher, in which six families were selected to progress to the interview process.

In the final wave of recruitment, some families were recruited through word of mouth. In discussing the study with community members, some people suggested friends or family members they felt would be ideal participants. These individuals asked permission

from these families for the researcher to contact them. From this step, six additional families were invited, five accepted the invitation to be interviewed and one abstained.

The combined recruitment steps generated a pool of 57 potential participants. Recruiting continued until the recruitment pool was sufficiently diverse. The objective of the study was to interview key informants on family feeding that represented 18 to 20 families. Cases were selected with the help of the KSDPP Intervention Coordinator until 20 interviews were completed. Characteristics of cases are found in Table 1 and Figure 2.

Key Informants on Family Feeding Practices

The study sought information from one key informant in each family. Key informants were defined by their intimate and regular involvement in the broad range of family food activities. This source of information is supported by sociological investigations into the domestic coordination and management of family feeding. In these previous studies, information on family feeding was derived from interviews with the one person who is usually responsible for feeding the family (Blake et al., 2009; DeVault, 1991; Gregory, 1995; Warde & Martens, 2000).

Data Collection

The data were generated from April to November 2005.

Table 1. Characteristics of key informants and their families

Pseudonym	Age	Education completed	Employment status	Number of children	Income range in thousands of dollars CAN	Number of children attending daycare	Parent structure
Ann	40	High school	F/T employee	2	50 – 75	1	2 parent
Diane	25	High school	F/T employee	2	25 – 50	2	2 parent
Mary	31	University	F/T homemaker	2	25 – 50	0	2 parent
Megan	35	CEGEP	F/T homemaker	2	0 – 25	0	2 parent
Heather	35	University	F/T homemaker	3	0 – 25	1	2 parent
Marleen	35	High school	F/T employee	4	25 – 50	0	2 parent
Angela	38	College Associates degree	F/T employee	3	0 – 25	1	1 parent
Deborah	30	University	F/T employee	1	25 – 50	1	1 parent
Kelly	27	University (1 year)	F/T homemaker	4	Don't know	0	2 parent
Margaret	30	High school	F/T employee	3	0 – 25	1	1 parent
Lucy	31	Grade 10	F/T homemaker	3	0 – 25	0	1 parent
Elaine	32	CEGEP	F/T homemaker	2	25 - 50	0	2 parent
Jessica	31	CEGEP (1 year)	F/T homemaker	3	50 – 75	1	2 parent
Rita	32	College	F/T homemaker	2	0 – 25	1	2 parent
Susan	28	University	F/T homemaker	2	25 – 50	0	2 parent
Tanya	28	CEGEP	F/T homemaker	2	25 – 50	0	2 parent
Alison	27	High school	F/T homemaker	2	50 – 75	1	2 parent
Renee	25	High school	F/T student	2	25 – 50	1	2 parent
Debbie	33	University (certificate)	F/T employee	3	50 – 75	1	2 parent
Sonia	37	CEGEP (1 year)	F/T employee	2	0 – 25	1	1 parent

F/T - full time
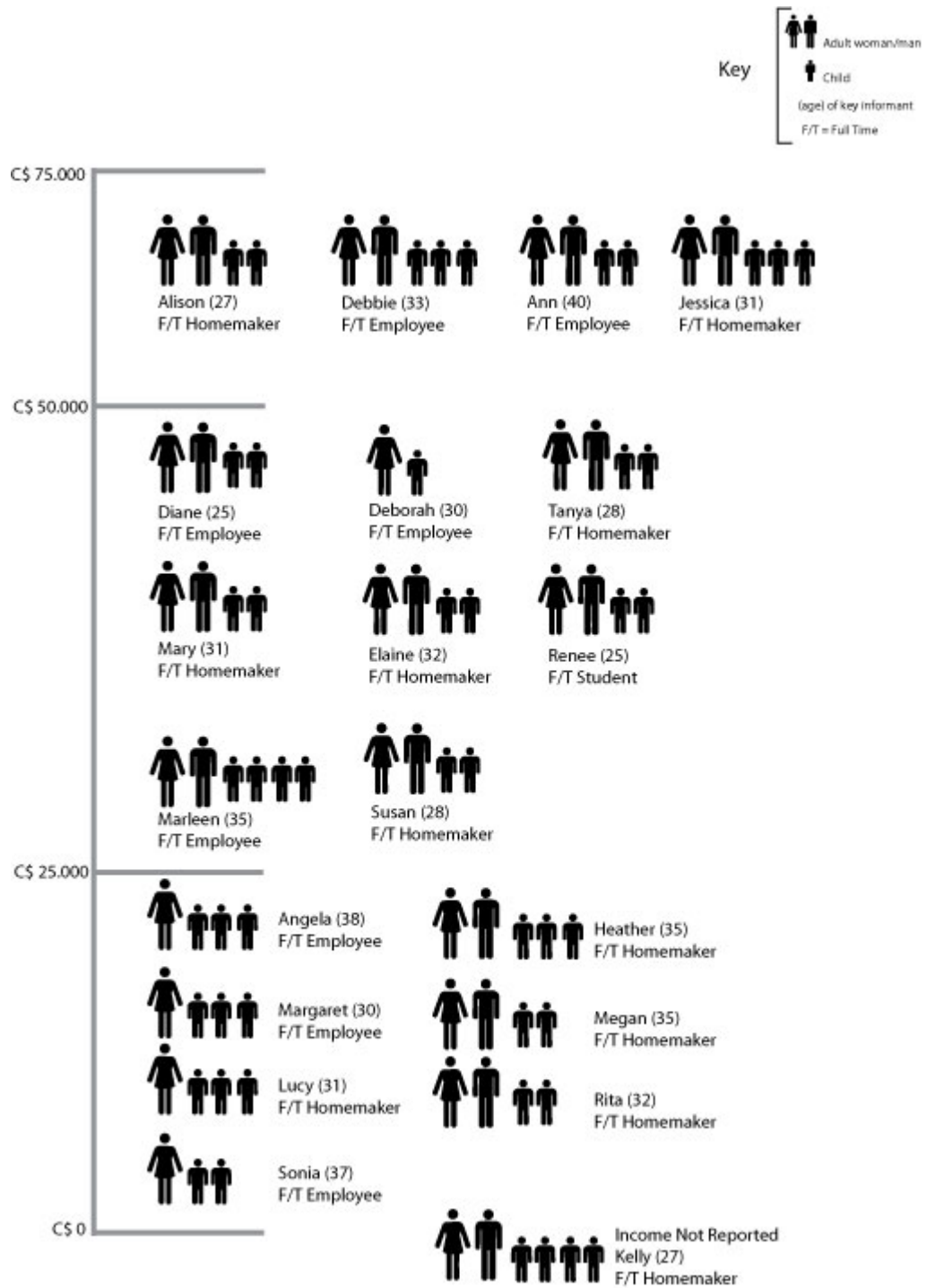
Figure 1. Characteristics of key informants and their families

Initial interviews

In-depth, open-ended interviewing generated the primary information on family food choice practices. *In-depth* refers to exploring a topic in detail to deepen the researchers' knowledge of it; *open-ended* describes eliciting all relevant responses. As a data collection method, ethnographic interviews are suited to learning about the daily experiences of research participants, and permit an appreciation of the participant's perspective (Fontana & Frey, 1994; Poupart, 1997; Schensul, Schensul, & LeCompte, 1999).

The interview guide was developed from topic areas previously elaborated by sociological investigations on food and families (Charles & Kerr, 1988; DeVault, 1991). The first draft of the interview guide was reviewed by an educator working with the KSDPP and two nutritionists from the local hospital. Feedback on the draft assisted in modifying and improving language and content. The guide was tested with one woman from the community with a preschool child. From the trial the questions were refined and re-ordered. The final interview guide was used in all of the interviews (Appendix 2).

The opening statement of the questionnaire described the purpose of the study and reminded participants that the interview was not an evaluation of their family's nutrition, but rather a study of the activities involved with feeding their family. The interview then began with the very general question "What types of things does feeding a family involve?" Specific types of family feeding activities such as acquiring food, eating out, preparing

food, and feeding children were then introduced. Each question was followed up with a number of probing questions in order to elicit more detailed information if necessary, and to encourage participants to elaborate their discussion further. Specific questions on health and nutrition related to family, and related to family meals, were also included. Family information was collected from directed questions to identify who was living in the household; their age; employment status (full time, part time, seasonal, at-home full time); income range (0 - 25000K, 25000 - 50000, 50000 - 75000, 75000+); and education level completed for adults.

During the interview the order of interview questions was sometimes modified depending on the topics generated. For example, if the topic of grocery shopping was brought up by the participant, then questions addressing this topic were pursued. This allowed the interviewer to pursue the logic of the participant and encouraged a conversational flow throughout the interview process.

I conducted all interviews employing the focused interviewing techniques acquired through research and professional dietetic training. Also helpful was the experience I had from developing interview guides, conducting interviews, and transcribing and analyzing transcripts as a research assistant. All interviews were audio-recorded using a digital audio recorder with microphone which delivered good quality recording. Each interview lasted between 30 and 75 minutes. According to each participant's preference, interviews were conducted either in their home (n=15), in the interviewer's private home in the community (n=4), or at the participant's workplace (n=1). Following each interview, a brief summary note was made to include the researcher's reflections on each interview. The majority

(14/20) of the interviews were transcribed verbatim by myself with the remainder completed by the KSDPP research staff. Each transcript was verified against the original recording for accuracy, and corrected where necessary before accepting the final document for analysis.

Data Management

Interview transcripts, interview summaries and field notes were saved as digital word processor files. Transcripts and summary notes were imported into *Atlas.ti* data analysis software used to manage data, code text and audit the process of data management and analysis (Atlas.ti GmbH, 2010). Matrices were constructed using OpenOffice.org spreadsheets (Sun Microsystems Inc., 2009). A copy of all digital information was saved on an external hard drive and kept in a location external from the university.

Data Analysis

The process of coding interviews was considered an analytical step since the text portions are being segmented according to criteria that requires interpretation (Miles & Huberman, 1994).

Coding Strategy

Coding is the process whereby selected portions of each transcript were tagged with codes to indicate different ideas or concepts associated with interview data. Codes were used as labelling devices to assist in grouping similar ideas, and distinguishing among different concepts.

The coding strategy was initially deductive or theory driven. To begin with, a list of start codes was constructed based on concepts developed for the Food Choice Practice Framework. These start codes included: food choice practices; meaning rules; conduct rules; allocative resources and authoritative resources. Agency was assumed to be operating as part of food choice practices, and hence was not coded. Instances where key informants described challenges or opportunities related to food choice were identified as being either constrained or enabled. These challenges or satisfactory experiences were then further explored for how they involved rules and resources.

In order to capture the different dimensions or aspects of meaning rules; conduct rules (norms); allocative resources; and authoritative resources, new codes or sub-codes were created within each start code. This is what we then referred to as a code category. This step involved inductive coding in a manner similar to *open coding* (Strauss & Corbin, 1998), in the sense that new codes were substantiated by the data, and informed by other empirical work on family feeding. However, unlike open coding, which is a step toward outlining a data-grounded theory, coding in this study was theory driven.

Coding Food Choice Practices

Food choice practices were identified as the instances when participants described their own, their child's or their family's food selection or decisions along with elements of the food choice context, setting, or environment. When a participant discussed grocery shopping, for example, they might explain their food choice purchases according to different motivations: some items were needed for children's lunches - which required

being mindful about the school policy; 'meats' were selected as items needed to anchor the evening meals, etc.

Initially codes used to label food choice practices corresponded to topics used in previous studies: *obtaining food*, *preparing and consuming food*, *food services* and *feeding children*. These were key family feeding activities, through which other studies analyzed social structure. As coding progressed, however, codes were renamed to capture the variation in the ways participants described their food choice practices. For example, we identified limiting or encouraging certain kinds of foods motivated by health concerns as a distinct type of food choice activity and thus coded such practices as ***monitoring food choices for health*** [emphasis added to identify a code label]. As such, codes reflected the ways participants discussed their food choice experiences. Another example of how codes were inductively generated would be when participants discussed food preparation in terms of food choices organized around a meal structure. Inductively the code ***creating meals*** was created to represent food choices that were described in terms of their place within the family's meal pattern. After renaming, merging and refining codes, we retained five food choice practice codes.

Instances where food choices were experienced as constrained or enabled were identified and coded as such. Food choice practices were constrained when the experience, based on participants' descriptions, was described as challenging, difficult, or unsatisfactory to desired food choices. Enabled food choice practices were identified from key informants' descriptions of these as those experiences which expressed a sense of ease, satisfaction or control of the situation. Often, memos were attached to instances where food choice

practices were enabled or constrained in order to document impressions of what features seemed to create challenges or opportunities.

Coding Rules and Resources

Although a lengthy process, the inductive coding of rules and resources became a key step in identifying structural properties of food choice practices. These provided a way to group and distinguish categories of rules and resources involved in food choice practices. Meaning Rules, for example, reflected the symbolic significance of food qualities (healthy, junk food, good food, and bad food). These categories were distinguished from those food choices associated with parenting values and beliefs which were also expressed by key informants. Thus two codes were created: one to group descriptors of food qualities, and the other to group meanings that reflected parenting as discussed by key informants. In essence, this coding process further characterized aspects of social structural rules and resources.

Coding verification

The translation of this conceptual framework into a coding scheme was validated using a number of checking points. As part of a group of peer researchers, comprised of doctoral and post-doctoral students, we met regularly to discuss issues and challenges in qualitative research. These meetings provided an opportunity to present the coding process to the group multiple times. During group meetings, we were able to scrutinize and verify if the operationalized concepts were coherent with the coding strategy.

The integrity of the operationalized codification scheme was improved through its verification by a research assistant from the community hired to independently validate the coding scheme. The community researcher was previously involved with the KSDPP's research, and familiar with the subject matter. This individual was oriented to the conceptual framework. The objective was to have her and I code three identical interviews to compare and contrast coding results. A number of difficulties were identified, particularly the number of sub-codes that populated each start code category and their abstract definitions. Furthermore, the difficulty in being able to identify clear instances of food choice practices, and the number of instances of food choices per interview, made coding difficult. From this exercise we undertook a revision of the code list where the assistant and I addressed each code and agreed on how to merge similar codes, drop redundant codes, or rename others. The list was further refined after verifying the concept definitions and making clearer code definitions. Retained in this list were: 7 food choice practice codes; 17 codes grouped as 'meaning rules'; 7 codes grouped as 'conduct rules'; 11 codes grouped as 'allocative resources'; and 17 under 'authoritative resources'. This exercise proved challenging but fruitful resulting in a final refined list of codes (Appendix 3) used to distinguish and organize the rules and resources of food choice practices. These codes were organized into the sub groups that are presented in Table 3 which is found in the third article of the thesis. Progress on operationalizing concepts into data codes was overseen by my research supervisors who identified weaknesses and strengths in the approach, and provided direction for improving the integrity of the coding.

Analysis and Interpretation

Analysis was guided by two objectives: 1) to identify and characterize food choice routines in families; and 2) to explain how social structural properties - rules and resources - constrain and enable food choice routines. In this next section, I describe the links between both analysis steps and their relevance for the overall thesis. The analysis procedure for each objective is addressed in detail in each of the empirical articles and will not be repeated here.

Identifying and Characterizing Food Choice Routines in Families

The characterization of *routinized food choice* practices was a process that built upon recoding instances of food choice practices to reflect the perspectives of the key informants. Initially, instances were tagged according to the topic areas of family feeding activities that had previously been explored in sociological research. However, in taking the participant's perspective, the intentions and motivations they expressed distinguished different types of food choice practices. This was a key step since it provided evidence for the integration of 'agency' (perceptions, intention, motivations) into food choice practice. In comparing among the types of food choice practices within and across families, we found that similar routine practices were evident in all families. For example, when key informants discussed preparing food, food choices were described in terms of a meal pattern. From key informants' perspectives, food preparation in families is about creating meals. Matrices were constructed in order to compare variations in ***creating meals and snacks*** across families. Routinized practices were verified by checking that each was identifiable across families (Miles & Huberman, 1994). The final list of routinized practices

was refined throughout the analysis by constant comparison and ensuring its presence across interviews (Strauss & Corbin, 1998).

Analyzing the structuration of food choice practices

Analyzing how rules and resources structured the constraints or opportunities of routinized food choice centred on the routine food choice practices of ***creating meals and snacks***. This routine was chosen from among the others because it was the most robust in terms of the extensive description used within families, and for its variation across families. Analysis focused on explaining constraints and opportunities in relation the rules and resources involved. Rules and resources, previously coded, facilitated their identification in relation to the food choice practice that was being discussed. Similar circumstances of constraint or enablement described by families were grouped together. For example, families describing challenges in buying food related to limited income, discussed similar shopping practices oriented toward using limited income resources. These families were also noted as being headed by single parents, with three or more children. By comparison other families described buying what they desired with very little financial constraint. These families often had two parents or were lone parents with well paying jobs, and just one or two children. Rules were reflected as well in the norms families tried to meet and what their food choices meant in relation to limited finances. For example, nutrition was important, but food selection priorities ensured children had the food they needed for lunch at school and the food they liked to eat at home. In comparison, families where money to buy food was not limited, flexibility to try new things and to increase variety in the family meals was deemed meaningful or desired.

Quality of the Research Process

It has proven difficult, if not impossible or even desirable, to create a standard set of criteria to judge the broad scope of research encompassed under qualitative research (Seale, 1999). The multitude ways for judging the integrity of qualitative research reflect different orientations, approaches and methodologies characteristic of qualitative research (Creswell, 2007; Mays & Pope, 2000). The criteria for assessing the quality of the findings, or knowledge gained from a qualitative research project, is different from the conventional categories of reliability, internal validity, and external validity/generalizability which are used to judge the research designed to test quantifiable hypotheses. The criteria of credibility, transferability and dependability are notions that parallel validity and reliability as a way to discuss the trustworthiness of research from naturalistic enquiries and the knowledge it claims (Lincoln & Guba, 1985).

Credibility

Credibility refers to how coherently research observations link with their interpretations. In other words, credibility tells us how accurate the study findings, as represented by the researcher, reflect the reality of the research participants (Creswell, 2007). Credibility is built upon a number of features of the research process. These include the researcher's knowledge of and experience with the research context, as well as appropriately using methods and techniques for data collection and analysis.

The experience and knowledge I have of Kahnawake is based on being brought up in the community, and continuing to work and participate in community life. Conducting

research within one's own community contributes complex and deep understandings of the historical, geographical and contemporary characteristics of the research context, and its relationship to families and food. At a more personal level, being a mother and primarily responsible for feeding my own family, provided the advantage of being very familiar with the subject matter of this thesis. However, no longer being a resident of Kahnawake, and putting my professional health knowledge into practice, gave rise to my different family feeding perspective, upon which I constantly reflected during this study. Furthermore, being involved with the KSDPP provided ample opportunity to informally discuss my research observations and questions with community members, health professionals, educators and families. Often knowledge of the research context is something to be gained when researchers approach unfamiliar contexts, however in this case the study context was my first home, and continues to be a key place in my work and family life.

Credibility is further supported by researcher skills. My research experiences are built upon a Master's degree in nutrition that examined food use in two Cree communities in Quebec (Delormier & Kuhnlein, 1999). I also worked on two qualitative research projects as a research assistant with the KSDPP prior to designing this study. One study created a theory of program implementation based on a case study of the KSDPP (Bisset, et al., 2004). The second study involved an analysis of the KSDPP's intervention activities from documents and interviews using content analysis, and evaluating them according to their stated program theory (Delormier, Cargo, Kirby, & McComber, 2003). A seminar in modern social theory provided the opportunity to discuss social theoretical application in public health. A reading group provided an introduction to the ontology of critical realism.

A course in qualitative research provided me with an overview of the philosophical, methodological and technical issues involved in qualitative research. Thus I was able to build upon this diverse backdrop of research skills and experiences.

The credibility of the research strategy in testing the framework to explore food choices as social practices rests, in part, on the appropriateness of its theoretical concepts. The adaptation of Structuration Theory to the study of food choices was developed in the theoretical article that was published (Delormier, et al., 2009). Prior to its publication, the article was peer-reviewed resulting in further work to improve it, thus increasing its credibility as a valid social perspective.

The framework was pilot-tested by using it to interpret the results from a published study which explored the role of context and food practices of youth at school (Wills, et al., 2005). In this exercise the social influences associated with shaping youth food practice patterns were re-framed using the concepts of social structural rules and resources from the framework. This supported that the conceptual framework could illuminate structural aspects of routine food choices.

Credibility was further enhanced through peer debriefing meetings with a group of qualitative researchers and me meeting regularly to discuss the practical application of the theoretical concepts during the coding and interpretation steps. The coding validation project undertaken further contributed to improving the concordance of coding (Laperrière, 1997).

The findings from the analysis were presented at the KSDPP research team meetings and at special meetings of the KSDPP Community Advisory Board, the community group responsible for overseeing that research respects the KSDPP Code of Research Ethics, community nutritionists, and research supervisors at critical steps along the way. Discussions generated in these meetings served to validate the interpretations as empirically based, theoretically sound and coherent to both the study community, research peers and supervisors.

Transferability

Transferability parallels the notion of generalizability and concerns how study findings can be transferred, rather than generalized, to a different cultural, social, temporal or geographic context. For qualitative research to be judged on the basis of transferability requires significant and relevant description of the research context. This information should allow one to compare and contrast study findings in relation to another study situation. For this project, the study context description included the community in which the research took place, the larger health research project in which this study was situated, as well as the people who participated in the study. The study findings that describe family food choice routines and their structural properties are context specific to Kahnawake. However, because this study aims to develop a conceptualization of food choice practices as a social process, the applicability of the concepts in another setting is the sort of 'transferability' that becomes relevant. Further work remains to be done to assess the transferability of the framework.

Dependability

The concept of dependability parallels conventional reliability criteria to evaluate research. For qualitative studies, dependability relies on providing a clear account of the overall research process, providing detailed descriptions on selected procedures and justifying decisions taken throughout the research. Dependability also relies on being able to support the plausibility and credibility of the study results.

The research information in this report aims to provide a transparent account of the research process that was led by me, under the supervision of the research supervisors. It also furnishes the significant information needed to reconstruct the research process for subsequent research projects. An audit trail containing the details of the research process was documented in a journal.

Ethical Considerations

The KSDPP Code of Research Ethics (CRE) outlines the principles and responsibilities for researchers (Kahnawake Schools Diabetes Prevention Project, 2007). In accordance with the CRE, the proposed research was presented to the KSDPP research team, before making a formal presentation and request to CAB. Once approval was received from CAB (Appendix 4), the formal application to the Comité d'Éthique de la Recherche de la Faculté de Médecine (CERFM) de l'Université de Montréal was submitted. Ethical approval was granted (Appendix 4) and a letter was also sent acknowledging the care with which the ethical concerns of the community were considered (Appendix 4). Consent forms were developed according to the format suggested by the KSDPP (Appendix 5) and read prior to each interview.

ARTICLE 2 - Food Choice Routines of Families with Children: A Theory of Practice Perspective

Treena Delormier, Katherine L Frohlich & Louise Potvin

Author Contributions: This article is based on empirical work guided by the Food Choice Practice Framework. The goal was to demonstrate and describe the character of family food choice practices as integrated among a family's usual activities and routinized in recurring practices. I designed the study, collected and analyzed the data. The idea to base the article on the characterization of food choices as social practices was jointly developed by Katherine Frohlich and me during our discussions in relation to data analysis. Louise Potvin and Kate Frohlich provided guidance throughout the study. The entire manuscript was written by me with the feedback received in numerous discussions with Drs. Frohlich and Potvin in order to develop the ideas in the paper. Both co authors have authorized the inclusion of the article in this thesis (appendix 6).

Title: Food Choice Routines of Families with Children: A Theory of Practice Perspective

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ABSTRACT

Objective: To characterize family food choices as socially embedded routines by applying Giddens' concepts of social practice, agency and social structure.

Design: Qualitative study based on semi-structured interviews with the person primarily responsible for family feeding.

Setting: Indigenous community in Québec, Canada.

Participants: Twenty families with preschool aged children, living in the community purposively selected on characteristics of family structure.

Phenomenon of Interest: Food choice practices involving children in the context of family feeding.

Results: Five distinct food choice routines involving children were identified across all families. These were 1. Creating regular meals and snacking for children; 2. Ensuring that children eat; 3. Monitoring children's food intake for health; 4. Teaching/shaping children's food choices for the future; and 5. Food choices from food services. Routinized food choice practices involved consciously enacted decisions (agency) interacting with socially structured opportunities and challenges (structure) in contexts of food choices.

Conclusions and Implications: Food choices are not disconnected events but form routines embedded in and characteristic of daily family life. They involve conscious choices practically oriented to the structured conditions of routine family life. Nutrition interventions need to consider routinized family food choices and the social structures that reinforce these into enduring patterns.

Key words: food choice; food choice routine; preschool child; family; social practice

INTRODUCTION

Social perspectives can provide useful insights into human food choices, yet are rarely applied in nutrition (Crotty, 1993; Murcott, 1995). Focusing on needs for healthy bodily growth and function, nutrition tends to regard food as a source of nutrients (Ikeda, 2004). In behavioural nutrition, food choices are framed as risk factors guiding nutrition education to target diet-related behaviours for modification (Barker & Swift, 2009). Certainly food is biologically essential for proper nutrition and good health, however food is also both a construction and constructor of social life. As part of procurement, preparation and consumption activities, food connects people, forming social groups such as families, cultures, classes and societies (Mennell, et al., 1993b). In turn, the food choices people make are shaped by social structures such as politics, history, culture, and economics (McIntosh, 1996). This paper reports on taking a social perspective to study food choices in families with young children by framing these as *social practices*.

Social practice, a concept from Practice Theory, examines social action as enacting both *social structure* and *agency* (Giddens, 1984; Ortner, 1984). Social practice involves intentional choices (agency) by knowledgeable agents whose know-how is structured by past experiences, informing about what is possible, meaningful and appropriate in the immediate circumstances of interaction (Cockerham, 2005; Frohlich, et al., 2001; Williams, 2003). We proposed to study food choices as social practices by examining these as processes involving intentional choices within structured opportunities or constraints (social structure) that make up the social context of food choices (Delormier, et al., 2009).

Investigating food choices as social processes requires studying the settings and activities in which food choices occur (Gregory, 1995; Murcott, 1988). The motivations and intentions behind food choices express more than just meaning associated with the nutritional value or overall health. Rather, they express layers of meaning that are attributed to their social context. Changing family food choices can involve reorienting a family's values and priorities. For example, studies of dietary change in families reveal how these are experienced as disruptions to routine food choice practices that can create normality. In one study, families were found to modify their usual food practices to assimilate dietary change and resume normal family life (Gregory, 2005). In another study, when dietary change was stimulated by a family member surviving breast cancer, there was greater family support for making healthful dietary changes compared to families without the breast cancer survivor experience (Beagan & Chapman, 2004). In yet another study which looked at the role 'significant others' played with 'diet changers', 'significant others' revealed both supportive and constraining responses toward dietary change (Paisley, Beanlands, Goldman, Evers, & Chappell, 2008). Variations in the ways a family might experience dietary change could be understood in consideration of complex meanings and processes that food constitutes as part of social relationships (family, couples). Changing dietary behaviours to improve health, where families play a key role, requires appreciating the intimate relationship between food choices and family (Coveney, 2002). Narrowly examining food choices by isolating dietary behaviours removes the social significance of food and neglects the practical explanations and meaning of people's dietary patterns.

We proposed a theoretical framework conceptualizing food choices as a social practice (Delormier, et al., 2009). This study addresses the need to clearly operationalize our concept of food choice practice through empirical examination, and as a preliminary step to analyzing the relationship that exists with social structure, a key feature of practice. Our aim is to: a) situate and describe routine food choice practices by exploring the specific context of family feeding activities and; b) to demonstrate the interplay of agency (conscious choice) and social structure (social and physical environmental influences) involved in family food choices.

Theoretical Framework: Food choice As Social Practice

Giddens' (1984) theory of practice explains how people's daily actions are processes which constantly reproduce social divisions, and constitute the social order. He describes social practices as contextually situated activities, constituting both agency and social structure in a symbolic interplay of subjective and objectives forces. Social action is neither determined by agency (voluntary choice), nor a reaction to deterministic social systems (social structures); practice constitutes both. Giddens (1984) regards practice as the key domain of social interaction, where people reflexively and competently carry on a social activity by deploying causal powers (agency) and drawing upon social structural rules (systems of meaning and norms) and resources (material and authoritative power). By drawing on social structures, these same rules and resources which are the means of practice are also the outcome, reinforcing the conditions for future practice.

Many daily social interactions take on a second nature feel as a consequence of being routinized in recurrent activities oriented to practical purposes. *Routinization* for

Giddens is grounded in *practical consciousness*, the tacit understanding (know-how) of what is happening in social life and what we have come to expect from others. "Routine is integral both to the continuity of the personality of the agent as he or she moves along the paths of daily activities, and to the institutions of society, which *are* such only through their continued reproduction" [emphasis in original](Giddens, 1984, p. 60). For Giddens, social structure exists only when instantiated as rules and resources in practice. Thus we examine food choice as patterns (routines) of social practice and understand these to be shaped and reinforced by the practical limits and opportunities structured in the contexts of everyday life. In families, this entails exploring routinized food choice practices as recurring activities involving food selection and decision-making.

METHODS

Study Setting

Kahnawake is a Mohawk territory located 15 km south of Montreal, in Québec, Canada with a population of approximately 7500 in 2007. Community-based research in the 1980's documented high rates of Type 2 diabetes for Kahnawake (Montour & Macaulay, 1985) and catalyzed the Kahnawake Schools Diabetes Prevention Project (KSDPP) in 1994 (Macaulay, et al., 1997). The KSDPP focuses on school children and maintains a supportive community intervention program in collaboration with community health and social development programs and services. The present study contributes to KSDPP's research activities, and is geared toward informing diabetes prevention nutrition interventions with families.

Participants

Families were recruited via invitation if they met the criteria of having at least one child between the ages of three and five. Invitations were sent through: 1) the community's daycare, primary schools and the family center; 2) specific families via the child's daycare educator; and 3) word of mouth. Fifty-seven families responded. We purposively sampled twenty families to represent diverse family circumstances (Patton, 1990). Criteria upon which families were selected were parent structure, representing one-parent, two parents, shared custody or blended/reconstituted families; age of parents; number of children; and low, middle and high income level. Initially twenty-two families were contacted, one abstained from participation, another dropped out citing lack of time. Participant characteristics are in Table 1.

Data Collection

Qualitative semi-structured interviews were conducted by the first author with the person who identified as being primarily responsible for feeding their family. Interview questions sought detailed descriptions of the family's involvement in: a) food acquisition; b) eating out; c) food preparation; and d) food consumption, and were guided by previous research on family feeding as social processes (Charles & Kerr, 1988; DeVault, 1991). The interview guide was reviewed by community nutritionists and an educator, and then pretested with one family. Interviews lasted 30 to 75 minutes, were conducted in the participant's homes (n=15) or a convenient location (n=5), were digitally audio recorded, transcribed verbatim, and verified against original recordings. Field notes were kept to record observations following interviews. Information was also requested on households

including: number and age of children in the family; age of, and employment status of adults; range of family income; and education level of participants (Table 1).

Data Analysis

Transcripts were read, and re-read until all instances of *food choice practices* were identified. Food choice practices were operationalized as those activities wherein participants described their own, their child's or their family's food selections or decisions along with elements of the food choice context. Food choice practice *agency* was recognized as the intent or purpose expressed when describing food choices. *Social structure* was operationalized as social and/or physical elements in the context of interaction which impacted upon food choices. *Routinized* food choice practices were identified as routine food choice activities in families having recognizable recurrence across the study families. Each routinized food choice practice was coded inductively, creating a code for each newly identified food choice practice (Strauss & Corbin, 1998). The codes identifying practices were refined by merging codes that represented similar food choice practices. A research assistant verified coding by re-coding instances of food choice practices in three interviews. Challenges in identifying practices and describing them with codes was discussed and resulted in a refined list of food choice practice routines. Matrices were used to organize practice patterns and their variations, and to verify that each routine was identifiable across families (Miles & Huberman, 1994) using spreadsheets (Sun Microsystems Inc., 2009). A community research assistant and an academic peer research group verified food choice codes. Two separate groups of community members discussed the material and supported the finding that identified food

choice routines were consistent with those found in families in the community. Data were managed and organized using Atlas.ti software version 5.5.5 (Atlas.ti GmbH, 2010).

Ethical Approval

Ethical approval was obtained in accordance with the KSDPP Code of Research Ethics (Kahnawake Schools Diabetes Prevention Project, 2007) and then from the Faculty of Medicine's Research Ethics Committee (CERFM), at the University of Montreal.

RESULTS

The findings describe five kinds of family routine activities or practices in which we found family food choices (table 2). Each practice was identified as occurring regularly among each family's feeding activities. Quotes from interviews demonstrate food choice practices as purposefully oriented by participants, hence expressing agency or intention. As well, each practice illuminates meanings (structures of signification), obligations (structures of legitimation), and resources (structures of domination) which were analyzed as indicating aspects of social structural rules. The following quotes are italicized, bracketed text is added for clarification, and names are pseudonyms.

Routinized Practice: Creating Regular Meals and Snacks

Creating regular meals and snacks captures food choice practices dedicated to providing families and children with regular nourishment. Families described a typical pattern of breakfast, midday 'lunch' and evening 'supper' meal. Aspects that varied were the amount of time spent planning, preparing and consuming the meal, the places meals were

eaten, who prepared and shared in the meal, and of course the foods typically served. Participants referred to snacks or snacking as food eaten outside of meal-time. For children, this varied in frequency. Participants also referred to who made food choices and to places snacks were eaten. Illustrating how circumstances give rise to food choice practices around meals, Alison, a married, full time homemaker with two children, describes her typical pattern.

> *When I first wake up, the clothes are already folded so I fix their bowls of cereal, if it's not bagels, or this morning they had cereal. Then I fixed (daughter's) lunch (for school), which was Scooby Doos (canned pasta), an apple and banana, a pudding, and orange juice box, then I take her to school. When I come back, I cook lunch for me and Rose, which is soup and a sandwich. And then supper, I normally have something out of the freezer for lunch, that way it's thawed in time to get Agatha (daughter). It's just whatever I pick out is whatever I cook....There's a routine,....once I pick up Agatha I get home, I start cooking, she does her activities she has to do for the day. Then, he (husband) gets home we eat, we clear up the table, they go in the bath tub, they're in their rooms watching TV. That's the routine every day, if not I'd be crazy for sure. (Alison)*

Meal focused food choice practices were integrated into Alison's daily activities. As a full-time homemaker she coordinated her work along with meal-related food choices to fit different family needs. She referred to her day-to-day practices as important to normal life by implying life might be crazy without her routine. By contrast Deborah's routine reflects her circumstances as a lone parent with one child and full time work in the professional sector.

> *I'd pick a weekday (to describe a typical day), because he (son) is usually going to daycare and it's usually pretty rushed in the morning. It's not often that I actually get to sit with him at the table to eat breakfast 'cause I'm either in the shower or trying to wake him up, more often than not he is in front of the TV with his cereal bowl watching TV while I shower. I have to make his lunch (for school) and if I'm lucky I make my lunch at the same time. I have two things for his lunch because it's what works, if I try anything else, it just fails. We have ham sandwiches in a pita (bread) or tomato sauce pasta, like ScoobyDoo or Bob the Builder (canned pasta). Apple sauces, yogurts, or those mini-gos (yogurt), cheese sticks, fruit-to-go bars, I can't get him to eat fresh fruit at school, I send bananas or apples but he won't eat them,*

crackers, like CheeseBits or WheatThins. Supper time is fun, at least two or three evenings a week I end up at my mother's. (Deborah)

Deborah, like all participants, described her typical food choices around a pattern of meals. However her routine was generated from limited time related to her full time employment, and being solely responsible for her son's daily care. Deborah's mother was a resource, helping her coordinate work and childcare. After work, Deborah often ate with her mother, which she found especially convenient in the summer when days are long and warm and schedules relaxed. Other participants also remarked that food choice patterns differed during the school year when schedules were more rigid compared to summer break.

Families with children at school or in daycare faced more pressure to eat before leaving home, compared to children who stayed home and had more time to eat in the morning. All children attending kindergarten or daycare were expected to bring a lunch from home. Packing a child's lunch was a complex task involving meeting a child's food preferences, trying to keep food varied from day-to-day, respecting food policies for managing nut allergies and promoting healthy eating. Children at home had more options for lunch and often ate with a parent or sibling. Supper was the meal invested with the most time and effort and was intended for the whole family. Eating the meal together was not always possible given other activities which often took place at this time.

Routinized Practice: Ensuring That Children Eat

Ensuring that children ate involved practices aligned to assure that young children ate at regular intervals and consumed enough. This process included giving children freedom to make their own food choices, catering to children's food preferences and forcing children to eat. Ensuring that children ate raised contentious issues about the respective control children and parents had in making food decisions. A child who refused to eat, or

who did not eat when expected, presented considerable worry to participants and created stressful family situations. Expert recommendations supported norms where children should be able to decide what to eat and often conflicted with the importance parents placed on ensuring their child was fed. In fact many parents were trying to figure out the best approach to offer children choices without being forceful.

> *...it's to the point where I can't even enjoy my supper because he nicks and picks so much. So, I just make him his, and I make myself mine...I am always on a norm making two suppers, one's for him and one is for us. That's how it is, I'd say I'd never do it, but I do it. It's easier than fighting with him.(Rita)*

In order to avoid conflict and be assured her son ate, Rita catered to his food preferences, an approach she thought she would never do.

Other parents had stopped catering so children would eat what the rest of the family did.

> *My older daughter wasn't having a variety of foods. What is she going to eat? What is she going to eat?! So we'd make something we knew she'd eat. But now it's okay, I got out of that, we'll put a little bit on her plate for her to try it and it's opened her up to different foods. But I was doing that, and then it was making more stress on me because, all she wanted to eat was noodles. (Heather)*

Getting her daughter to eat a variety of food meant insisting the child ate the food prepared for the family. Letting children have choices was a practice participants did not always experience themselves as children and represented a newer way of feeding children.

> *But what I find funny is we'll go to my mom's, and you know what they say, like old school, where you got to sit there and eat everything, you know like if he (son) don't eat all his food, or he just picks, I don't force them, you know look, like he might not be hungry, look he's just got a little stomach. (Lucy)*

'Old school' referred to ways of forcing a child to eat, and not presenting children with options compared to current notions where children are expected to have choices. A number of participants had taken part in local 'raising healthy eaters' nutrition programs which addressed managing children who were picky eaters.

I've talked to (the nutritionist) who says, "don't give him anything, let him learn, he's gonna go to bed hungry". But when we're all tired and it's toss up between giving him an apple, which is good for him, is filling his tummy and gonna make him go to bed, and listening to him whine for two hours, which he will 'cause he's hungry, he gets the apple.(Ann)

Such programs promote child feeding perspectives where parental responsibilities lie in providing healthy foods, while children's responsibilities are to choose what they will eat. Providing children with nourishment is a basic parenting responsibility; the different ways parents fed children suggested discordant norms structured from their past family experiences, current family situations, experience from nutrition programs and child feeding techniques. Besides providing nourishment, participants also felt responsible for keeping a peaceful family atmosphere. Ensuring that children ate was a continuing challenge, particularly when a child was considered a picky eater.

Routinized Practice: Monitoring children's intakes with health in mind

Monitoring what children ate varied in intensity from general mindfulness that healthy food was balanced out with junk food, to a keen awareness over detailed lists of food, nutrients or contaminants. Practices involving food choice monitoring often conveyed health or nutritional meanings and norms. Participants used nutrition guideline terminology, for example, variety and moderation and paid attention to intakes of certain items such as fresh fruit, vegetables, milk and water.

I am trying to make smaller portions of my food, and make more variety, maybe three vegetables rather than two vegetables, my son likes Caesar salad, but Caesar salad is really fattening I mean in terms of the salad dressing...(Susan)

Monitoring was also an approach for the whole family, though monitoring was mainly discussed in terms of children.

I changed my eating habits a lot because (when) we used to be at my mom's, it was like cooking in all kind of butter and greasy stuff all the time. (Lucy)

Limiting foods was more intense compared to encouraging healthier food. Limited most often were 'junk' food: fast food, potato chips, French fries, hot dogs, cakes, cookies, heavily sweetened cereals, and fruit juice. Most participants typically tried to restrict sugar, and sugar-containing food. A few participants monitored specific nutrients, ingredients or contaminants such as carbohydrates, fats, trans-fat, hydrogenated vegetable oils and possible contaminants in fish.

> *We stay away from hydrogenated oils as much as possible, and we've been reading a lot more labels, and this is fried in hydrogenated oils, we're not buying it. (Heather)*

Monitoring food choices extended to grandparents' choices as well. In eighteen of twenty families, at least one grandparent was routinely involved in feeding children. Participants discussed appreciating grandparents who supported healthy food practices.

> *She (grandmother) worries more about their diet than I do...she makes sure her house has no junk food for them at all, no cookies, nothing. She really watches. (Elaine).*

However not all grandparents shared efforts to make healthy choices for children, though this was tolerated by participants at times.

> *I get annoyed when he's at his father's mother's because I know that he is getting a lot of junk and juice and then she complains that he doesn't eat a meal but she's feeding him fruit roll-ups and juice all day, just really not what I would give him. (Deborah).*

Extended family members or ex-partners who routinely cared for children were mentioned less often than grandparents. Challenges and opportunities stemmed from shared childcare in families where food choices were not under the control of mothers.

Monitoring food intake in relation to child body weight/shape perceptions was mentioned less frequently, but conveyed serious concerns since being overweight or obese were perceived as socially unacceptable and posing health risks.

> *...it's an awful thing to say, you want them to look good, but you know you want them to. I want them to feel good about themselves, I want them to feel like I'm healthy and I have a good body, no one's going to look at me, people aren't going to say you're fat or call them names you know. ....my daughter, she's skinny, I find she's skinny, I*

don't find he's big, but he's a different shape, I wonder it that affects the way that I feed them, I feel like she could use extra things that are fattening, I try to offer him fruits more or yogurt (Mary).

Concerns about a child's body shape increasing the risk of becoming overweight or obese had an impact on food choices. Participants in these families kept track of what children and families ate and made choices in light of this. Food choice purposes were oriented to ensure a healthful balance of food while meeting the family's food preferences. Other extended family members involved in feeding children however could create challenges or support families' desired food choices.

Routinized Practice: Teaching Children And Shaping Food Choices

Food choice practices oriented toward imparting knowledge and skills to children were regular activities in families. Food choices were a medium for diverse lessons, with some teachings specifically focused on health, and others on general life skills or attitudes believed to be useful later on. In some families, the links between food choices and having a healthy, strong body were explicitly taught to children. Role modelling was another way to convey lessons. The need to instill children with good eating habits while young, and to prepare them to make their own choices later on, was recognized.

....you got to start when they are small, if you don't then they're going to grow up to be teenagers and all they're going to eat is French fries and bacon, stuff that's not good for them. ...I find parents should be more involved with what their children eat, but they just give them money and send them to the (local hamburger stand) and wonder why they are so fat or why they can't run, 'cause their hearts are clogged or whatever. (Jessica)

Being involved in children's food choices while young denoted a clear purpose, particularly when considering the presence of fast food retail outlets available. Teaching children about reducing the risk of developing chronic disease was specifically raised in interviews. A number of participants reflected upon family members living with diabetes, or who had died from diabetic complications, as orientating their food choice practices.

On my side and their father's side, diabetes and all that runs in the family, so I am big on that, not eating too much junk all the time. My mom is not so strict with that and she'll get mad at me like depriving them of stuff, they got on both sides chances to get diabetes, you know, so we're more at risk (Lucy).

Families displayed awareness of the role food choices played in preventing diabetes. This knowledge was due in part to community mobilization efforts over the previous decade to prevent Type 2 diabetes through promoting healthy eating habits and physical activity (Paradis et al., 2005), as well as reflecting upon what family experiences with diabetes meant to food choices.

Shaping children's food preferences and openness to a variety of foods was part of teaching children. Participants were aware of newly available food items and valued their children being knowledgeable about new food and open to new experiences.

I never saw those noodles, the whole wheat, or the green and orange. I don't want my kids to go somewhere and go "ewww, what the heck is that I never seen that!" So, even for myself, I have to grow up and learn how to eat healthy food.(Renee)

Others placed less priority on shaping food preferences and experiences, due to other concerns of ensuring that picky children ate or simply tried to create regular meals that the majority of the family would eat and enjoy.

Food choices were part of activities valued for their potential in developing skills, such as measuring, counting and manipulating foods. Food practices were a way to foster children's self-esteem. Passing on cultural practices of growing and preparing traditional food was an important part of teaching children *Kanien'kehá:ka* (People of the Flint = Mohawk) identity for a few parents.

We look back at how things were before, people grew their own corn, people worked in the yard, just the healthier lifestyle that they had back then, and trying to instill that by having him (son) work in the garden, harvesting his own food, or planting. That way he'll get to know where that comes from and take pride in that, and that's more nutritional and good for you than opening a box of chips...(Susan)

Food was an essential part of family activities geared toward teaching children. The shared belief that current actions impacted upon future health, and adaptability reflected a strong prevention orientation in the community promoted through many health and safety programs. This thinking dovetails with the Seven Generations philosophy of the Kanien'kehá:ka and other indigenous peoples that today's actions should take into consideration consequences for future generations.

Routinized Practice: Using Food Services

Across all families, food choices were regularly made outside of the household setting, mainly at fast food restaurants which included home delivery, drive through or take out, and eating out at restaurants. Frequency of food service use varied from very rarely for families on limited incomes, to daily for busy families with higher incomes.

Several restaurants in the community and neighbouring towns offered free home delivery and regularly advertised their menus and promotions via the postal service and community television, radio and newspaper. Home delivery was a convenient solution when time or energy needed to prepare food was lacking, even for those on the strictest incomes. Pizza represented the most popular home delivery practice.

...if I have that extra money and everything's been hectic, instead of cooking what I was planning on cooking [is the kind of situation] for when pizza comes in [when I need] a quick supper put out. (Margaret)

Margaret usually cooked supper, however pizza delivery helped resolve hectic situations when time was insufficient to cook a meal.

Another purpose of food service delivery was treating families and having a break from cooking.

A lot of times on the weekend, that's what we'll do, just have a break, after being out all morning, we're back [and] we do lunch, then by about four o'clock it's like, "oh

I'm tired." I don't want to cook so…then we'll order [something], usually pizza. (Heather).

Home delivery was widely available, and families routinely relied on food choices from these establishments for convenience or enjoyment.

Recreation and fun were the primary motivations for taking children out to eat. Parents typically went to places that catered to children, most often McDonald's, Burger King, Wendy's and Pizza Hut.

Harvey's, Burger King and McDonald's are first 'cause the kids like that first. It's a theme restaurant, it's nice, it's geared to kids, plus they have the jungle gyms, they know how to entice kids (laughs), they think it's a fun place and then they get happy. But when you go there you spend like twenty five dollars on food and they don't finish it. (Megan)

Some parents expressed disapproval of food from fast food restaurants but nonetheless took children there to have fun. Food choices were perceived as being nutritionally poor and often the food was hardly eaten. However, children could eat, get a toy and play there, while parents could have a break and watch their children have fun. Drive-thru options from these same establishments provided convenience when there was little time to stop and eat, generally when children were on their way to, or from, activities organized around supper time. In families where many children participated in multiple activities it became very difficult to eat well.

I find a lot of people around here (from Kahnawake) because a lot of the kids are in sports or like certain families are in sports,... they'll be like 'Oh my God we just ate hot dogs for four days', it all has to do with convenience. (Kelly)

By contrast, eating out in family-style restaurants for casual dining was far less common. These places provided leisure activities for parents and settings for extended family gatherings such as birthdays. However taking young children was time consuming, less fun for children, less leisure for participants and incurred greater costs.

If we're invited somewhere to dinner, like with my family somewhere fancy I usually don't go. We are not restaurant material; we are more Burger King, Pizza Hut. (Lucy)

Food choices from food services outside of the home were discussed as alternatives or replacements to eating at home. Eating from food services conveyed meanings of convenience, pleasure, enjoyment, leisure and a break from cooking tasks. Some tensions stemmed from healthy eating norms which were interpreted as being incoherent with fast food choices, and the norms of acceptable family meals being prepared at home. Restaurants and free home delivery were resources for convenient food choices options for participants who are constantly managing families, children's activities and feeding responsibilities. Part of recreation activities for children and their parents involved going to fast food restaurants that cater to children.

DISCUSSION

Our study explored food choices as recurring activities integrated into the daily lives of families with young children. The study was theoretically guided by Structuration Theory (Giddens, 1984) to frame food choices as social practices expressing an interplay of agency and social structure. Using this approach we describe food choices as social practices, by characterizing the recurring activities in which food choices are embedded, and by pointing out agentic and structural features involved. Agency was expressed in the purposeful orientations of families' food choices. Social structure was reflected in the shared meanings, (structures of signification) and norms (structures of legitimation) of daily family feeding, as well as resources of time, family support, skills, and decision making authority (structures of domination) that facilitate food choices.

Our approach led us to identify food choices as routinized activities in family life. With our focus on families with young children, we identified five kinds of recurring activities that integrated food choices. Each routinized activity illuminated the intentional choices, as well as the meanings and obligations or responsibilities that participants brought to light through their accounts of family feeding. *Creating regular meals and snacks* captured typical daily activities geared toward providing three regular meals for the family in general. The needs of particular family members, within a families' daily activities, provided the context for the different patterns and timing of meals described across families. For example, making lunches for children to bring to daycare involved planning and shopping for food, planning for and the preparation of lunch, but were linked as an ongoing process geared toward providing meals on a regular basis. This finding offers an alternative view to the perspectives of meals as singular events, the 'family meal' shared with family members (Rockett, 2007; Story & Neumark-Sztainer, 2005). Since the frequency of family meals has been associated with improved nutrient and food intake among youth (Gillman, et al., 2000; Larson, et al., 2007; Neumark-Sztainer, et al., 2003), recommendations indicate promoting the occurrence of family meals. However our findings demonstrate that the form of family meals emerges from the ongoing activities which shape opportunities to eat together. Our work exposes that family eating is embedded in routines generated within complex processes. Eating family meals therefore is not as easy as deciding to sit down and eat together, but involves the patterning of families' usual activities which go beyond food and eating. Research has shown that while families generally value and desire eating together, conditions of daily activities and employment often frustrate attempts at doing so (Devine, et al., 2006). Ways to understand how eating

together is generated into regular practices could help to understand the conditions which promote 'family meals' or meal creation practices. By approaching food choices as routines, we identified a concrete set of activities in which meal-focused food choices are constituted. We also appreciated that meal creation is a meaningful process embedded in the context of family life.

The routine practice of purchasing food from food services was an alternative to preparing another routine of meals at home. When food was purchased out of the home for the whole family, the purpose was usually practical in providing a break, or way to manage limited time. When the focus was placed on children, fast food restaurants were a way to entertain children. Eating out in a restaurant was primarily described as leisure for parents. The meanings and practical purposes of purchasing food from restaurants for families became clearer when examined in the context of family activities. Research examining the frequency of fast food meals in families found these to be associated with poorer food intake and the home's overall food environment (Boutelle, Fulkerson, Neumark-Sztainer, & Story, 2007), leading to recommendations for educating parents on the negative effects of fast food. However, in considering patterns of food choices from food services, we see these are interrelated with work, home, family and recreation activities. In this study participants expressed knowledge that fast food, in particular, was less healthy than food prepared at home. However, our look at the context of these food choices underlines other practicalities and the social significance food choices from restaurants carried, and helped to explain their regular occurrence in families.

Three routine food choice practices focused on children, and could be considered parenting or child-feeding practices. Ensuring children ate, reflected parental responsibility to provide for children's food needs, and was distinguished from monitoring practices where food choices expressed the intent to get children to eat healthy foods and avoid junk food. Research on parenting styles and child-parent interactions has identified different approaches parents take to maintain or modify their child's intake (Fisher & Birch, 1999; Patrick & Nicklas, 2005)). While this research has focused on child-parent feeding interactions, monitoring practices identified in our study revealed that family and extended family were involved in feeding children. Furthermore, family members' involvement in feeding children was often noted as supporting or detracting from parents' desired food choices for children. Thus, looking at the feeding activities of families also allowed us to consider how other family members influenced what children ate. This expanded focus moves beyond the parent-child dyad and contributes to an understanding of food choices as family processes for which little information exists (Wardle, 1995). Finally, food choice practices integrated into activities geared to teaching children knowledge and skills has not yet been reported in the literature. This finding offers a perspective that view food choices in families as teaching opportunities for children.

This study also introduces the notion of food choice practices as routinized or as routines. Structuration theory recognizes 'routinization' of practices as the actions which constitute institutions through their recognizable forms of activity that endure through space and time (Giddens, 1984). In our study we identified recurring activities as the typical food choices practices described by participants within families, and found evidence for

these routines in all families. Families have been recognized as institutions rooted in their regularly occurring practices which create a coherent social group (Morgan, 1996). Routinized family food choice activities therefore, can be understood as contributing to the constitution of families.

The notion of family food choice routines presents interesting implications for public health nutrition. By viewing food choice practices as contributing to the constitution of families and constructing certain family forms, changing food choices implies disrupting family patterns that have come to be established as a consequence of family structures. Dietary reform that envisions families as targets would thus target patterns of activities and the circumstances which structure families. Such patterns are what Gregory proposes as creating normal family life (Gregory, 2005). This view recognizes that routines are generated from the rules and resources in contexts where families interact, and of which people are quite knowledgeable. Such knowledge is structured by past experiences and underlies the ability of families to competently carry on day-to-day practices in ways that seem natural. This view differs from interpretive perspectives where routines are understood as rationally crafted through individual cognitive efforts.

A recent study on 'eating routines' described these according to their recurring routine dimensions (food, time, location, social setting, physical conditions, activity, recurrence, mental processes and physical conditions)(Jastran, et al., 2009). Routines were explored by these authors as carefully strategized by individuals to provide the best fit in consideration of multiple social, personal, cultural, context and resource related influences. This study supports our description of food choices as recurrent. However our view differs

by understanding routines as practically oriented, not cognitively strategized, and generated in a recursive relationship with socially structured meanings, norms and resources. We argue that people are mostly tacitly aware of the ways social contexts 'influence' their ongoing routine food choice activities. It explains the second nature feel that has been attributed to typical family feeding activities, such as meal planning that occurs while leafing through food specials in the newspaper (DeVault, 1991; Travers, 1996).

The following study findings should be considered in light of the following limitations. The data from the study relied on one or two interviews with the person primarily responsible for feeding the family. Including other family members would have provided a more complete account. Nonetheless we did identify distinct food choice routines and their variations across all families. Analysis proceeded inductively, resulting in five food choice practices. This list may not be exhaustive and likely represents only the most predominant practices. The practices may not be entirely generalizable to other families and their characterizations need to be tested for their existence in other settings. The utility of studying food choices as social practices will require assessing how well it guides other explorations of family food choices in identifying distinct routines.

IMPLICATIONS FOR RESEARCH AND PRACTICE

Social perspectives have the potential to create better informed nutrition practice (Coveney, 2004b; Stratton & Bromley, 1999). Food choices have yet to be theoretically framed as social practices. We have developed a conceptual framework to address this gap (Delormier, et al., 2009). Social theories of action have rarely been used to study food

choices, perhaps due to their level of abstraction which renders them impractical for specific applications like food choice research. This conceptual tool is envisioned for public health researchers and practitioners who address population food choice patterns, and proposes studying food choices as routinized activities.

Our work implies that nutrition interventions targeting children and families consider food choices as a set of practices characteristic of, and occurring routinely in families. It also suggests that intervention designers reflect upon how food choice routines impact upon children's nutritional status. The examination of children's food habits would be enriched by considering how agency involved in feeding children and families is structured by the realities of family contexts. The relevance of nutrition interventions may increase by recognizing food choices as essential practices that contribute to the constitution of families.

ACKNOWLEDGEMENTS

Table 1. Participant and family characteristics

PARTICIPANT		FAMILY	
Age	**(n=)**	**Income**	**(n=)**
25-29	6	0 - 25 000	7
30-34	8	25 - 50 000	8
35-39	6	50 - 75 000	4
		over 75 000	0
Education	**(n=)**	don't know	1
Grade 10	1		
High school	7	**Structure**	**(n=)**
College	7	1 parent	5
University	5	2 parent	15
Employment status	**(n=)**	**Number of Children**	**(n=)**
Homemaker	11	1 child	1
Student	1	2 children	11
Full time employment	6	3 children	6
Part time employment	2	4 children	2

Table 2. Routinized family food choice practices in families with young children

1. Creating regular meals and snacks
Practices dedicated to organizing daily food choices around three daily meals for families and children. Examples:
- Shopping for food needed for supper meals
- Packing lunches for children to take to daycare/school
- Planning what to prepare for supper

2. Ensuring that children eat
Practices and ways of ensuring that children eat regularly. By contrast children who are picky and do not eat are perceived as a problem and cause for concern. Examples:
- Catering to a child's food preferences
- Letting children make their own food choices
- Forcing children to eat

3. Monitoring children's intake for health
Practices that involve overseeing the kinds and amounts of food that families and children eat and to ensure a balance that is positive for health. Examples:
- Restricting/ limiting food (sugar, junk food, juice, fat, carbohydrates)
- Monitoring intake of recommended food (vegetables, fruit, milk)
- Monitoring portion sizes in relation to body shape
- Adopting healthier cooking practices

4. Teaching children and shaping food choices
Practices that involve passing knowledge and skills to children to prepare them for the future. Examples:
- Making links between food and health & disease prevention
- Involving children in food preparation skills

5. Using food services
Family food choices that use food services. Examples:
- Ordering home delivered food
- Taking children out to eat at fast food restaurants
- Eating in family style restaurants

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ARTICLE 3 - The rules and resources of food choice practices: A structuration analysis of food choice practices in families with young children in an Indigenous community, Canada

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Title: The rules and resources of food choice practices: A structuration analysis of food and families with young children in an Indigenous community, Canada

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Abstract

The purpose of this study was to investigate the social structuring of family food choice practices. We developed a theoretical framework to study food choices as social processes. Giddens' structuration theory was operationalized to study food choice as a social practice, and social structure as *rules* (meanings and norms), and material and authoritative *resources* in food choice contexts. We explore how rules and resources structure opportunities for some families, and challenges for others. We do this through the examination of one routine food choice practice in families we have named *creating regular meals and snacks*. This is a qualitative research study based on multiple cases of family feeding experiences. The sample is comprised of 20 families with at least one preschool child, from one Indigenous community in Canada. Data are from in-depth interviews with a key informant, the person primarily responsible for family food related activities. Results characterize social structural rules related to food quality, feeding children, being a parent, feeding families and ways in which communities handled food related issues. Material resources were income, transportation, land used for agriculture and hunting, and culinary skills. Authoritative resources were family support, available time for food work and skills to manage this time. Rules and resources helped explain why family food choices involved in creating regular meals were experienced as constrained in some contexts and enabled in others.

Introduction

Understanding the social context of food choice is essential for explaining distinct food choice patterns that characterize diverse population groups. Concepts that satisfactorily integrate food choice and social context to explain food and eating patterns are lacking. The interplay of agency and social structure symbolized in the concept of *social practices* offers a way to examine how people's food choices are shaped in interaction with the structures of society. We undertook a study to explore food choices as social practices in families with young children. This article reports on the structuration analysis of one prominent food choice practice found to be routinized in the usual family activities dedicated to creating regular meals.

Critical sociological perspectives argue that public health nutrition issues are rooted in social circumstances (Coveney, 2004a; Power, 1999; Schubert, 2008; Travers, 1997). A study on the social organization of nutrition inequities, for example, revealed how social welfare policies, food system commerce, and nutrition and health discourses created circumstances that severely constrained women's ability to feed their families (Travers, 1996). Sociological studies addressing women, food and families further demonstrate how women, through their assumed, everyday feeding practices, enter into structured class and gender relations. As social processes, routine feeding practices are shaped by, and reproduce the structured social order. These studies convincingly argue that in order to deal with nutrition inequities experienced in families and/or attempting to transform eating patterns of family groups, communities will require changes at the broader social structural levels.

It still remains critical, however, to understand the mechanisms, by which broader social forces structure food choices, at the level of practice. The notion of routinization explains how practices become sustained through time as discernible routines, understood to be recursively shaped in relation to social structure. Recurring food choice patterns observed in families with young children have previously been characterized as food choice routines (Delormier, Frohlich, & Potvin, in preparation). Families are integral in shaping children's food practices and thus their nutrition status (Campbell & Crawford, 2001; Nicklas, et al., 2001). When we consider families as connected and created through their recurrent daily practices, 'family' represents more than the environmental influencing factor, or a setting for intervention as it is often modelled. Food choice routines carried on in families contribute to their constitution. Studying the modes by which family food practice routines are socially structured has yet to be proposed and explored empirically.

Understanding the ways in which food choice routines are structured to produce constraints or create opportunities could provide important directions to nutrition interventions aimed at improving food choices. Identifying and explaining how social structural properties reinforce healthy or unhealthy eating patterns, for example, could guide nutrition interventions in targeting the social circumstances structuring food and eating patterns. We aim to contribute a social perspective of food choices by empirically exploring the social structural constraints and opportunities of food choice patterns across a diverse set of families in one community. This article extends our previous work using Anthony Giddens' structuration theory (Delormier, et al., 2009) to explore social structure as rules and resources that enable or constrain family food choice practices.

Structure as rules and resources

The core concepts of Giddens' structuration theory are *structure*, *system* and *duality of structure* (1984). Structure refers to structural properties, the sets of *rules* and *resources* that exist virtually in the memory traces of human agents and are marked by the absence of the subject. Social systems by contrast involve the situated activities (practices) of human agents. Social systems are patterned practices which endure through time and space, recursively organized by their social structural properties. Social structure viewed as a form of rules and resources is not independent of action, but rather social structures are re-created and maintained through social interactions, thus reproducing structures which become patterned across time. On the other hand, action is not possible without structure, since action requires structures that were reinforced and recreated as a consequence of prior actions.

Integral to structuration analysis are "...social practices, biting into space and time, [which] are considered to be at the root of the constitution of both subject (agent) and social object (society)"(Giddens, 1984, p. xxii). The theory of structuration conceptualizes *agency* and *social structure* in an interdependent relationship, or duality, and constituted in practice. Social structure does not determine agency or social action; it is enacted and brought into existence through people's practices. As well, social agents, in drawing upon social rules and resources through practice, reinforce and sometimes change the social structure.

Analyzing structuration means studying the modes by which social systems are produced and reproduced by situated agents who draw upon rules and resources in various

contexts of action (Frohlich, et al., 2002; Giddens, 1979, 1984; Stones, 2005). For examples of the structuring modes by which feeding practices are recreated into patterns (by women, as caring, as being a mother), child feeding practices have been shown to be structured by norms where women are the expected caregivers, by shared meanings that caring families hold, by being responsible mothers, and gender relations which determine food related decision making power in families (DeVault, 1991, 1997). As a consequence of recreated practices or routines, the social structures of gender, meanings of family, and norms of mothering/parenting are reinforced.

Giddens conceptualizes structure along three dimensions; structures of *signification, domination and legitimation* (Giddens, 1984). Giddens uses the terms rules and resources as short hand to refer to these structural dimensions. Rules refer to systems of meaning and codes of conduct (norms) that represent structures of signification and legitimation respectively. Resources are structures of domination. They include allocative resources, that confer agents with control over material objects, and authoritative resources that confer people with control over others. Through their practices, individual or collective *agents* draw upon rules and resources. These can, in turn, structure circumstances wherein practices can be constrained, or enabled (Giddens, 1984; Stones, 2005). For example, full time homemakers making lunch for children at home may be enabled by opportunities created by having available time and flexible food choice options. By comparison, for employed parents packing a lunch for a child at daycare may face constraints structured by limited time, food policies, perceived expectations of daycare staff and meeting a child's food preferences.

In this article, we demonstrate some of the key concepts from Giddens' framework and evaluate their utility in characterizing social structural rules and resources of food choice practices in twenty families. We then explore one specific routine food choice practice; that of creating meals in families, to demonstrate how rules and resources can constrain or enable this key family feeding practice.

Theoretical framework: The structuration of family food choice practices

The way we operationalized Giddens' formulations of rules and resources to study food choice practices is as follows.

Meaning Rules - structures of signification

Meaning rules are communicated and interpreted through shared knowledge about food choice practices. Social structures shape food choice practices through interpretive schemes. Language used to describe junk food, or conveying health-related properties, for example, can indicate discourses about food and health in society. By examining parents' lay knowledge, Coveney revealed how meanings of food and health influenced the ways children were fed, and differed across family social class backgrounds (Coveney, 2004b). Working class families talked about health and food in relation to children's appearance and functional capacity, while middle class families tended to use scientific and nutrition terms. In another study, cultural ideas of food reflected meanings of well-being and parenting which were deeply rooted in the personal experiences and histories of poverty in low-income families (Kaufman & Karpati, 2007). The researchers concluded that contexts of poverty shaped perceptions and influenced child feeding practices in ways that could

negatively affect their weight and overall health. Cultural meanings and lay knowledge indicate interpretive frameworks that organized multiple, food-related beliefs, knowledge, understandings and perceptions which resonated with structures of signification.

Conduct rules - structures of legitimation

Conduct rules "are drawn upon against knowledge of the wider legitimation structures which indicate what is and isn't the appropriate thing to do" (Stones, 2005, p. 19). Thus, they reflect food-related norms expressed as expectations or obligations of what is considered acceptable behaviour. For example, in a study of family life and work, expectations of producing regularly shared family meals revealed norms legitimizing the proper or normal family and responsible parenting. The consequences of not meeting these expectations were often negatively experienced as guilt illuminating sanctions associated with normative family behaviour (Devine, et al., 2003).

Resources - structures of domination

Resources provide agents with the transformative capacity to get things done (Giddens, 1984). Allocative resources are distinguished from authoritative resources. Money to buy food, skills to transform food, land to plant food, equipment to hunt, and transportation are allocative resources drawn upon to feed families. Interpersonal connections and skills for organizing available time are authoritative resources that offer capacity to control family members and to make children eat. To illustrate, deferring to children's food preferences may indicate limited authority by a mother deciding what her family eats. Though analyzed separately, resources always operate along with norms and

meanings, for example, through expectations associated with grandparent status. Grandparents claiming authority to offer children *treats* while caring for them can limit parents' control over food choices. Lack of control over family food choices may indicate limitations in mobilizing authoritative and/or allocative resources. Power to feed families can be limited or enhanced, for example, by the resource structures that configure the opportunities or constraints in the ways families harness money and transportation to access supermarkets.

Family food choice as systems of social practice

Our study is interested in families which we understand to be created and maintained through action. Families are recognized as being constituted by their practices; the activities to do with family matters which build cohesion (Morgan, 1996). Taking this view, families are dynamic social systems of practices. Contributing significantly to the creating and reproduction of family systems are shared food activities (DeVault, 1991). Acquiring, storing, coordinating, planning, preparing, and consuming food are examples of such family constructive daily food practices. Even when lives are busy and more meals are being eaten out of the home, food related activities remain key activities contributing to the constitution of family life (Warde & Martens, 2000).

As social systems, families are interrelated with broader social relations. Family practices are structured by social relations of gender, class and ethnicity, for example, which organize family practices in distinct ways. The gendered distribution of domestic work, in households reveals this social structuring. As well, the distinct patterns of food acquisition and consumption in families from different class backgrounds, or by different

ethnicities illuminate social structuring of systems of family food practices (Calnan, 1986; Roos, et al., 1998; Mennell, Murcott, & van Otterloo, 1993a).

The way families are generally viewed in health promotion does not capture this active and socially structured orientation. Instead, *family* is viewed as a unit of analysis, a setting or environment, giving the impression of a container with clear cut borders. Viewing families as social systems opens up new routes of understanding of how families are conceptualized as impacting upon health. In our study we are interested in family food choices as well as the food selection and decision-making activities integrated into family life. Thus acquiring, coordinating, preparing and consuming food are key sets of practices in which food choices are patterned, and giving rise to the myriad forms in which families are constituted.

Giddens' formulation of structures in knowledgeability, and instantiated in practice, has methodological implications for empirical studies of structuration. Structure is embodied in an agent's knowledgeability, shaped by prior experience and informing future practice. Therefore, the *lay knowledge* that agents hold of their reality provide insights into how social structures shape health and well-being (Popay, Williams, Thomas, & Gatrell, 1998; Williams, 2003). Thus agents' knowledge of their lived experiences co-constitutes the world. Beliefs, for example, are aspects of rules and meaning systems revealed from lay knowledge. In Calnan and William's study of health-related practices in different classes, *health beliefs* rarely emerged spontaneously when people discussed daily life, indicating their low priority in everyday practice (Calnan & Williams, 1991). Interestingly, only in discussing food did beliefs about food and health emerge, with noted class differences.

Discursive accounts about family life allowed researchers to identify structured features that influenced food practices as economic and family constraints experienced by women, work conditions and 'lifestyle' influences, dual roles of employed women, and personal food preferences (1991). Narratives of daily food experiences reflected not only structured beliefs, but gendered and classed family circumstances. Thus instances of structures are evidenced in the knowledge and beliefs people hold about what shapes their experiences (Popay & Williams, 1996).

Social practices are another way of exploring social structural influences on health. Social practices, as the reflexive activities of agents that make and transform their world, helped explain how rules and resources, as *instantiations of the social structure*, created neighbourhood contexts for youth smoking practices (Frohlich, 2000; Frohlich, et al., 2002). In this study, smoking norms and resources discussed by youth through their experiences revealed how some neighbourhood contexts created opportunities for youth smoking and limited these in others (2002). Following these theoretical and methodological developments, we propose that instances of social structure as rules and resources will be discernible in peoples' accounts of their food choice practices.

Research design and methods

Context of the study and the families

This study aims to: 1) clarify the structures of signification, legitimation and domination (the rules and resources involved in shaping food choice routines in families with young children); and 2) explore how rules and resources shape the constraints and opportunities of family food choice practices.

The study took place at Kahnawake, a Kanien'kehá:ka (People of the Flint = Mohawk) territory, Canada (Québec province). Research was part of the Kahnawake Schools Diabetes Prevention Project (KSDPP). The KSDPP Community Advisory Board approved the research in accordance with the KSDPP Code of Research Ethics (Kahnawake Schools Diabetes Prevention Project, 2007). The research ethics committee of the Faculty of Medicine, University of Montreal (CERFM) approved the study.

Participants and Families

Families were recruited via invitation if they met the criteria of having at least one child between the ages of three and five. Invitations were sent through: 1) the community's daycare, three of four primary schools and the local family centre; 2) specific families via daycare educators and; 3) word of mouth. Recruiting continued until a pool of sufficiently diverse families was obtained based on parent structure (one parent, two parent or 'blended' families where two sets of parents care for children), parental age, number of children and socioeconomic status (income level, education level). We selected study families from the final pool of 57 families using purposive sampling (Patton, 1990), with assistance from a

community intervention facilitator familiar with the families. Twenty-two people were contacted for an interview - one person abstained from participation, and one dropped out citing lack of time. Participant characteristics are in Table 1.

Data Collection

The material was generated from April to November 2005 and comprises interviews and field notes. The first author conducted qualitative semi-structured interviews, employing open-ended questions designed to explore daily family feeding experiences with the person who was identified as being primarily responsible for this task. Our interview guide was based on previous sociological research of family food practices. It was reviewed by two community nutritionists and a local educator, and pre-tested with one family from the community. Interviews occurred in participant's homes (n=15), or a convenient location (n=5), and lasted 30 to 75 minutes. Interviews were digitally audio recorded, transcribed verbatim and verified against the original recording. Field notes were recorded following each interview. Additional information was asked regarding employment status and age of adults in the family; age of children; family income range (0 - 25 000, 25 000 - 50 000, 50 000 - 75 000, 75 000+ Canadian dollars); and education level of key informants (level completed).

Analysis

Identifying and describing family food choice rules and resources

The operationalization of *rules* and *resources* was theoretically informed by Giddens (1984) and further developed by Stones' work to render concepts operational for

social research (2005). We consulted two studies as empirical examples of operationalizing *rules* and *resources;* one analyzed youth smoking and the other nursing practice (Frohlich, et al., 2002; Hardcastle, Usher, & Holmes, 2005). The definitions developed for the concepts of rules and resources of food choices are found in Table 2.

A list of start codes was created (Miles & Huberman, 1994) representing the framework's concepts of meaning rules, conduct rules, allocative and authoritative resources. Food choice practices, instances where food choices were discussed, were identified and described with a label or code, and further examined for evidence of rules and resource. Within each category of rules (meanings or norms) and resources (allocative or authoritative), new aspects were identified and described by a code which captured the feature (Strauss & Corbin, 1998). For example, we identified and described *beliefs about food qualities* that key informants expressed as one aspect to group under the category of meaning rules. Another example is identifying *norms of parenting* as an aspect of the category of conduct rules structuring food choices. The expanding code list was reviewed in meetings with peer qualitative researchers who verified it against the conceptual framework (Strauss & Corbin, 1998). Lastly, we refined the list of codes representing the different aspects of rules and resources identified in the data, with a research assistant from the community. She independently coded 3 interviews, and compared her coding with that of the data analyst and first author, followed by a discussion of the challenges and consistencies in the code category organization. The code list was then reworked, eliminating redundant codes, merging similar codes and creating new, more accurate codes until we were satisfied that the final groupings represented family food choice rules and

resources (Table 3). Findings were shared through a presentation made to KSDPP Community Advisory Board members who agreed that the codes were reflective of family feeding practices in the community.

Analyzing structuration of family food choice routines

From an earlier analysis, five food choice practice routines were characterized from all families (Delormier, Potvin & Frohlich, in preparation). We explored one routine we called *creating regular meals and snacks* for structuration, as it was the most richly described routine across families. Identifying enablement or constraint in meal creation routines relied on examining the negative or satisfactory experiences described from participant accounts. Enabled or constrained food choices were explained by relating these to the rules and resources which were involved. Findings were presented to two separate groups of community members who supported the accuracy of family feeding practice descriptions, and the interpretations of the findings. Data, codes and memos were managed and organized using Atlas.ti version 5.5.5 software (Atlas.ti GmbH, 2010).

Results

Part 1 - The rules and resources of family food choice

Rules and resources of family food choices are found in Table 3. Interview quotes provide examples for each theme from interview quotations and are found in Table 4. All names are pseudonyms.

Rules - meanings and norms structuring food choices

Rules shaped food choice practices through norms and meanings relating to food qualities, feeding children, parenting, feeding families and community food use. Participants communicated diverse meanings about the qualities of food, where clear examples were food choices described as either good/healthy or bad/junk food. Food choices also conveyed meanings associated with parenting and raising children. Sharing knowledge about eating, food, well-being and role modelling taught children how to gauge healthy and unhealthy food choices. Food monitoring practices oriented toward balancing healthy food with poorer food choices further revealed beliefs about parenting and feeding children. The importance of taking one's family food preferences into account, and regularly providing proper meals was discussed in family terms.

Participants demonstrated sophisticated knowledge of the links between food choices and children's health. Nutrition concepts were expressed when using terms such as moderation, variety, balance, recommended servings of fruit and vegetables, choosing whole grain foods, as well as limiting sugar, fat and processed food. These notions woven throughout accounts of family food choices suggest that public health nutrition discourses have become part of the community landscape through health promotion over the past twenty years. Revitalizing cultural practices and asserting Kanien'kehá:ka (Mohawk) identity and nationhood were meanings in the community that shaped food choices. In some families food choices were interpreted as a way of carrying on cultural tradition, and respecting ancestors, as well as promoting self-esteem that comes with producing one's own

food. In addition, notions of nutrition, organic food, and raw food were interpreted as aligning with traditional cultural food practices.

Conduct rules mirrored the themes for meaning rules, but differed in the way they sanctioned certain practices and illuminated expectations or obligations. Being unable to meet expectations was experienced at times as guilt, a negative sanction. School nutrition policies that promoted healthy food choices and banned nuts to manage food allergies structured expectations on which kind of food sent to school, and reflected parenting obligations. Medical and public health discourses were apparent from concerns regarding health and disease which structured beliefs and knowledge about the role of current food choices on future health, and from norms regarding acceptable child feeding practices, health and even body shapes. Food choice rules were not always prioritized coherently among extended family members, posing challenges when childcare was shared. In the community, other parents' food choice practices were sometimes criticized, shedding light on understandings of parental obligations with regard to feeding children. For example while it was recognized that few places in the community offer healthy lunches for school children to purchase, parents were held responsible for what their child ate when giving them money to buy their lunch.

Legitimation and signification structures shaped food choice practices through the norms and meanings relating to food, feeding children, parenting, feeding families as well as community aspects of food, eating and families.

Authoritative Resources - Power in making food choices

Making food choices marked an exercise in power facilitated through different types of authoritative resources. Power to make food choices for children varied by settings and in relation to those feeding children. Although norms positioned women as primarily responsible for family feeding, decision making authority as an authoritative resource was continuously measured against considerations placed on meeting family food preferences. Authoritative resources were sometimes limited in relation to a husband/partner, and children, demonstrating children's power to influence family food choices. Grandparents who lived close-by often assisted with childcare, which came with authority to feed children in ways they felt appropriate. Although stating primary responsibility, key informant's authoritative resources for facilitating their desired food choices routinely shifted in relation to husbands/partners, the children themselves and extended family members.

Capacity to coordinate available time for creating meals was identified as an authoritative resource. Available time for food related tasks in families was usually limited, and its effective coordination an empowering skill. Employment structured severe time limits for participants, all of whom remained responsible for family feeding. Key skills needed to manage time, such as tacit ongoing planning, coordination and management, provided opportunities for making desired food choices. However, skills could not empower desired food choices when time was too scarce, as was often the case.

Family support was enabling when family members facilitated food choice practices through contributing to the feeding work. Though husbands did not refuse to assist with

food work, they did not actively assume the responsibility, usually stepping in to help when needed. Independent of employment, family life was active with routine, organized activities. Sporting involvement with numerous teams and clubs existed for all ages. Extra-curricular activities, youth clubs, school fundraisers, parent committees, volunteering, language classes, parenting groups, personal fitness regimes, health and social service appointments were some of the activities coordinated along with family feeding. Family support where others took on family tasks, and especially food or feeding work, was a valuable authoritative resource for creating family meals.

Part 2 - Structuration of food choice

Part two presents findings from the structuration analysis. Our analysis illustrates how rules and resources enable and constrain food choice practices. We explored the variation in routines dedicated to creating regular meals and snacks. Challenges or concerns discussed by key informants indicated constraining circumstances, while ease in carrying out meals or expressed satisfaction indicated enabling conditions. Below we present the findings from the comparison of enabling conditions, and distinct kinds of constraining circumstances, to explain how rules and resources were involved in their structuration.

Enabled meal-related family food choices

In some families routine meal food choices were described with a sense of mastery and presented few challenges. Meals were organized around similar times - lunch for those who were at home comprised impromptu snack-type food, 'left-overs' or quickly prepared items like sandwiches, soup, canned or frozen food; supper was invested with planning and

preparing ahead of time and intended as a hot meal, for husband/partner and children. Routine meal food choices were described as usual and important activities to which time and effort was directed daily. The quote below demonstrates the circumstances which characterized meals that were similar from day to day.

> *Making a list of what I am going to feed them all week is first, what is going to be good for them to eat. You know, for school, then for after school and then for supper. So it's the groceries to be done first, and then I come home and clean everything and then put everything away and then start making what I am going to make for the dinner, or the lunch the next day. (Jessica).*

We looked at food choice patterns with few constraints to understand how rules and resources were enabling. Key informants who described enabling circumstances were usually full-time homemakers who, in terms of resources, discussed control over available time to prepare regular meals. The constant rushing experienced by employed participants (discussed below) was relatively absent. Even when children of full time homemakers had to get ready for school or daycare, this did not pose much stress on food choices. Furthermore having a husband/partners employed full-time in the community provided regular, tax-exempt salary and benefits which enabled key informants to buy the food they needed. In combination with decision making authority, these key informants had the capacity to buy the desired food for their family's needs. In some cases food budgeting indicated managing limited allocative resources, though overall participants were satisfied with the food they were able to buy. In addition families had at least one car, often two, allowing flexibility to access grocery stores. Key informants demonstrated an impressive level of food preparation skills, with some trained in cooking or food services, a resource providing capacities to transform food for families. By contrast, one full time homemaker found cooking time consuming and intentionally reduced food preparation by sharing it with her husband in order to spend more time doing activities with her children.

Concerning rules, the emphasis and effort participants invested in creating the meals communicated its significance to family life. The evening meal held special importance, being regularly prepared and shared with family members on most days during the week.

Cooking for families was expressed as a source of enjoyment, despite challenges created by expectations of offering food that everyone would enjoy, making healthy choices and managing picky children's limited food preferences.

Constraints created by limited allocative and authoritative resources

By contrast, serious challenges in food choice practices were described by some families. Describing these challenging circumstances were key informants who were single-parents undertaking all family responsibilities by necessity, and adjusting to the transformations in their lives brought about by relationship breakups. Limited money and personal transportation clearly constrained food choice practices. Creating meals and snacks from a supply of bare essentials, and the ongoing efforts and concerns it brought about were characteristic.

> *I find for like survive-wise, you need all the basics, you know what I mean, which is all the nutritious stuff anyway.... I used to do that a lot, but [now] not so often, if it came to the last week of the month and you're really scrambling I even make sure I have everything to make our own bread, so if I don't have no more money and you got to get through 'til your cheque, you have everything there to make your own bread, make your own snacks. (Margaret)*

In Margaret's case, grocery shopping focused on buying only the 'basics' plus ingredients to make bread or snacks if money ran out prior to the next social assistance cheque. The importance of nutrition is reflected in noting how basic food is nutritious as well. Being able to make one's own bread and snacks demonstrates cooking skills. Limited money for food left little room for meal flexibility.

> *Well when I'm going to go grocery shopping I'll buy seven days worth of food, and so then I'll get two packages of beef, two packages of chicken, pork chops and steak,...before when I wasn't working, I would buy like for three weeks, and I would find that I'd be scraping by, by the last week or I'd go eat at my mom's house...if company comes over then all of a sudden I'm feeding five kids or six kids instead of three, it's hard...* (Angela)

In addition to calculating enough meat for meals, other items like portable juice boxes and single serving snacks were reserved for packed lunches and carefully calculated while

grocery shopping. Descriptions of packed lunches resembled those of other families whose children attended daycare or school, a likely consequence of food policies, and shared understandings of acceptable and practical items for a child's lunch at daycare.

In terms of resources, constraints were structured primarily through limited allocative resources. Limited income was associated with low paying jobs, often the result of having to find employment, or receiving a social assistance allowance. Transportation was limited by not having a personal vehicle or trying to contain operating and maintenance costs. Being solely responsible for all their family's needs as lone parents structured available time, what we consider an authoritative resource. Time dedicated to full-time employment, managing a household, and family activities as a lone parent restricted available time for creating meals. Support from extended family was discussed much less by these lone parent families compared to other lone-parent families who relied on family support daily (discussed next). Additional limited resources of assistance with childcare was especially constraining since these lone parent families each had three children, including a child under two years old. Thus, both limited allocative and authoritative resources created constraining circumstances, evident in the food choices involved in creating regular meals.

Concerning rules, it was important to provide children with food and meals they would enjoy, meeting expectations of pleasing children's food preferences and following food policies at daycare. Awareness of nutrition principles, which we found across all families, was less intensely discussed and rarely constraining, compared with other families who vigilantly adjusted food choices in line with nutrition and health ideals. Providing the supper meal held significance, and thus was the meal given the most attention.

Food choices enabled with allocative resources, constrained by rules

Not all families headed by lone parents were similarly constrained by limited allocative and authoritative resources. Other lone parent families in this study described having adequate money and personal transportation options. Eating breakfast in the morning was rushed due to getting ready for work and daycare or school. Packing lunches that met food policies, keeping stocked up on lunch items, and aiming to please children were constant challenges. These women rarely packed their own lunch and often ate lunch at food services if they weren't using this time to run errands. Evening meals varied, given the flexibility from a number of options available. Supper was either planned and prepared at home, shared with parents in their home or the participant's home, created quickly from something convenient/ready-to-eat, or home delivered/picked up from fast food restaurants. Even though these women currently did not feel compelled to keep to a formal meal pattern, they expressed being less than satisfied with their practical and flexible approaches which varied from day to day. It appeared that perhaps a regular three meal pattern reflected norms of two parent families experienced in their previous relationships. Flexibility of options for supper time meals resulted from exhaustion of being in the workforce all day, and culminated with children not demanding formal meals. Take Deborah's example of how supper for her and her one child varied throughout the week.

> *Summer is fun but, at least two or three evenings a week I end up at my mother's. So (we eat) like whatever she makes (51)... over here when I cook he will sit down and he will eat depending on what it is (57).Usually one night on the weekend it's like junk food, and maybe one day during the week might be junk food, if I go shopping or something like that, it depends. (Deborah)*

Sonia feels the need to get a supper meal done, though she realizes this wasn't necessary, especially on weekends when her children were with their father:

> *On the weekend, I don't really have to rush to do a big meal. I'll kinda cook, but they are not really here anyways, to eat, so I don't really cook big anymore. (Sonia)*

In terms of resources, their well paying jobs held in the community provided adequate income to buy desired food and purchase food services often. Regular extended family support, including ex-partners and their families, enabled opportunities where others contributed to caring for and feeding children. On the other hand, constraints arose when extended family members did not feed the child according to the same food choice rules. Constraint was also experienced through limits on available time created mainly by employment and obligations to family responsibilities structured by lone parenthood. Furthermore these lone parents had 1 or 2 children compared with 3 children, which bears on available time for feeding families vis à vis childcare demands.

Concerning rules, the norms of regular family meals somewhat constrained these women, expressed in their lack of satisfaction or confidence in the less formal and regular way their meal patterns occurred.

> *...some of it [shopping and food preparation] has changed recently just because of the fact that you know, now I am single, a single mother. But before, I always felt, like I have to go to [supermarket] once a week, you know because that's what my mother did. But it kind of evolved, even now she doesn't do that, she'll go to [local grocer] everyday or every second day, we've evolved together I guess you could say. That's why I like going there too, I'm picking up a meal, like [learning] cooking from her, I'm helping her and then I come home and I do the same thing. (Deborah)*

The importance of creating evening meals was expressed, but creating a supper meal depended on other family activities and available meal options. The imperative of making healthy food choices to promote the well-being of their children was very significant. Norms about the proper food and ways to feed children, that is, by giving them choices, often conflicted with children's preferences for nutrient-poor food. Extreme picky preferences meant that children refused many foods, and challenged parent's healthy food intentions.

Constraint on meal-related food choices by limited time resources

Limited available time for food and eating was a constraint across all families. However, the ongoing stress and constant rushing experienced in some families set them apart. Time availability was structured by a packed daily schedule of activities associated with full time employment, studies, or, for full-time homemakers, commitments to a combination of childcare, children's schedule of activities, household and family activities, and personal commitments.

Carrying out meals efficiently was skilfully accomplished by drawing on a number of resources: adequate money, personal transportation as well as the combination of skills, experience and family support. Food preparation skills, years of banked family feeding know-how, as well as husband/partners who assisted with many aspects of meal preparation though usually on an as-needed-basis were enabling.

> *I make everything (in a crock-pot). Beef stew, I throw ham in there, roast beef, spaghetti, and what is good is I'll make spaghetti in my Crock-pot and then I turn half of it into chilli and then the next day we have chilli, which you can do all kinds of other things with, you can make Sloppy Joes, tacos, anything. (Marleen)*

Marleen drew from her accumulated and extensive experience in food preparation, using equipment and dove-tailing recipes to ensure an ongoing cycle of acceptable meals. By contrast, limits on these time-enabling resources helped explain why other families relied on the purchasing of food services more often. Having enough money and transportation were resources that saved time by replacing food preparation.

> *Like McDonald's we go on Tuesday, I know all the schedules, Tuesday's when it's chicken burger day sometimes Friday when it is fish burger day. Tuesday night sometimes we'll go to Pizza Hut cause it's Kids' Night, they eat free. Like all the specials, I know when they are. (Renee)*

Renee expressed challenges in preparing regular meals at home, lacking skills she recognized in others.

[Quoting her friend who cooks daily]:"Every Monday is fish, every Tuesday is chicken." "Oh, I stay home and cook all their meals on Sunday." I tried that, it doesn't work, not for me.... I need to learn how to make side dishes. I'll be looking at stuff like chicken and I don't know how to make things together. Like fish, what could go with fish on the side?. I don't know french fries? (Renee)

From Renee's perspective, she lacked the skills and experience to make daily cooked, properly assembled, and healthy meals, but had the money, transportation and experience in taking advantage of fast food promotions. She noted her cooking skills, citing experience as a short order cook. Renee desired acceptable and healthy meals; however her structured know-how enabled using food services. Her ability to use food services enabled her to manage limited available time shaped by caring for her children, studying full-time while her husband, who usually helped out, worked away during the week.

Susan presents another case of time restrictions. Her available time to cook was limited by obligations of being a full time homemaker, caring for her two young children and time dedicated to revitalizing Mohawk (Kanien'keha'ka) cultural practices into her daily life. Language and food were two areas of practice to which she committed significant time and involved her children. Her food choices communicated strong beliefs in food self-sufficiency, strengthening Kanien'keha':ka (Mohawk Council of Kahnawake) identity as well as reflecting nutrition recommendations, organic and natural food discourses. Creating regular meals reflected her values, beliefs and structured her strong motivation for her desired food choices in spite of constant time constraints.

But I try not to let it be stressed out so that I can take the easy way out and make bad choices about what we're going to eat cause then it just makes you feel, "yuck." you know when you eat bad food? Yeah so, as stressful as it gets, I try not to make junk....I get a lot more satisfaction out of doing that, than picking up the phone and calling and saying, "hey, can I have something to eat?" You know, it's just... Mind you I like that too, I like to eat out. (Susan)

The rules, expectations and meanings of making appropriate healthy and culturally appropriate family food enabled Susan, in spite of limited available time and income. Her strong beliefs in enforcing values of cultural identity, along with her authority to decide

what to feed her family enabled her to transform her routines in spite of limited time and money.

Constraint and conflict structured by rules or decision-making authority

In a few cases, meanings and norms structured important challenges. The sense of frustration and dis-empowerment, experienced by these key informants, stood out. Further examination revealed that despite variations in identified food choice resources, norms created uncertainty, undermining participants' confidence about the 'right way' to feed families. For example some mothers struggled with the frustration of rushing to make a meal, which was perceived as failing to meet norms of ideal ways of eating.

> *I know that it's not the best thing for me when I know that my portion size is supposed to be this big and if I had prepared it...the other thing is, I'm thinking..(in exasperated voice)"Aggrrrrhh" I'm putting that on my kids, they need to, I want them to have that vegetable, portion control type thing, so here I am doing a bad thing to them by giving them this rushed meal. (Ann)*

In another account not presented here, Ann revealed her deep concerns about food and eating habits affecting body weight, health risks and body image. In another case Mary was concerned about her approach in teaching her children proper ways of eating.

> *But I've been wondering can somebody become anorexic or bulimic if you give them the wrong idea about food. That's another thing that I worry about. Maybe I just worry too much. I don't know if it's good to use an example, "you shouldn't eat this because you'll get fat", and I'm thinking, okay, am I telling them that they shouldn't eat? So then I'm thinking oh no... (Mary)*

The uncertainty over the right thing to do in terms of feeding and children, highlights the confusion created by conflicting family feeding norms which are structured by rules of conduct and meaning.

While most of the time these participants had the authority (resources) over their family's food choices, conflicts regularly arose in relation to husbands/partners, limiting

participants' capacity to confidently make family food choices. Ann's husband closed off any communication with his wife regarding healthy eating.

> *...he likes to do his thing, and if he's gonna be healthy and watch his eating habits he's not gonna talk about it, I'll only know about it because he's had one little dish and you know but he doesn't want to talk about it. I'm not like that. I want to be like, we're diet partners we're eating healthy together, yeah. (Ann)*

Naomi was usually satisfied with her unconventional food choices and flexible meal timing when her husband was not home, however her husband didn't share her approach.

> *You don't want to have some things (for supper) twice, my husband hates leftovers and I like leftovers. And he likes a lot of cheese and macaroni which is one of the worst things you can have because its carbohydrate...we have too much of that. I say they don't have, like my kids and him, enough vegetables and fruit. I try to make it anyway, and I eat it, and I'm hoping that it'll rub off on them. It's actually a drain to think about what we'll have for supper, because, during the day, I can cook anything for myself and my kids and they'll eat anything. (Naomi)*

Naomi felt obligated to meet her husband's preferences for meal related food choice which she did not share. This created ongoing dissatisfaction, primarily when it came to the supper meal. Thus there was conflict stemming from norms of meeting her husband's preferences and providing her family with nutritious food choices (lower in carbohydrate, less cheese and more vegetables and fruit).

Discussion and Conclusion

Our study set out to explore the structuration of family food choice practices. We first described the modes by which social structures of signification, legitimation and domination, as rules and resources, were involved in structuring families' food choice practices. We clarified rules as systems of meaning and norms related to food qualities, aspects of feeding children/parenting, feeding families, and community food. Investigating resources shed light upon power relations structured by differential access to material and authoritative resources. Next, we addressed the structuration of family food choices by exploring the constraints and opportunities observed in the most dominant and richly

described food choice practice of *creating regular meals and snacks*. For some families, creating of a meal was experienced with relative ease, while others were challenged to different extents and in different ways.

Exploring differential access to allocative or authoritative resources was particularly insightful for explaining the control or lack of control key informants expressed in accomplishing desired meal-related food choices for families. Having access to enabling resources, like adequate income and personal transportation facilitated access to make desired food choices. Limitation in these resources posed significant challenges. It is important to remember that rules could constrain as powerfully as limited resources. The limited confidence and sense of frustration regularly experienced by some key informants stood out. Examining rules, we found that conflicting expectations clouded understandings of appropriate ways to feed children and families. For example, it was important to offer meals that family members enjoyed, yet when these choices were understood as conflicting with nutrition recommendations, they caused worry. Expert discourses on nutrition, chronic disease prevention, child development, obesity and body image at times confronted expectations structured from past experiences regarding appropriate ways of feeding families and children. As well, the constraining attributes of authoritative resources were also revealed in conflicts where key informants' authority to confidently make family food choices was limited in relation to a husband's/partner's food choice expectations.

Resource analysis helped explain the different capacities families could draw from, in making desired family food choices. Resources were not independent of rules which structured food choices through norms of what was considered acceptable and meaningful

food choices for families in the community. Food choice practice rules revealed the value families placed on health, pleasing food preferences, being a responsible parent as well as a member of an extended family. The awareness of the role food played in keeping children healthy and preventing chronic diseases was quite sophisticated. As well, the importance of providing families and children with food they enjoy and prefer was significant for most of the key informants we spoke to. However, believing strongly in the health benefits of food did not always translate easily in practising healthy food choices if these are not accepted and enjoyed by family members. This helps explain the dissatisfaction some key informants expressed in making food choices that they knew family members would enjoy, but which did not meet expectations of healthy choices that parenting norms further endorsed.

Our study significantly advances the work with Kahnawake families, describing barriers and facilitators to healthy eating (Pierre, Receveur, Montour, & Macaulay, 2007). Pierre's reflection upon the factors that influence healthy food choices suggests that separating individual and environmental barrier or facilitators "is tenuous at best, the two interacting at multiple levels" (2007, p. 120). The interplay of social structural rules and resources with food choice practice provides a mechanism to explain how food choice experiences represent the intersection of individual and environmental influences. Therefore interventionists might be asked to reflect upon how rules and resources create and enable meaningful and acceptable food choices in families, and how this may support healthy or less healthy dietary patterns in families.

Our findings are based on a micro-analysis of social structure within families. We are therefore provided with only a glimpse at the broader institutions recreated by the rules

and resources of family food practices. Our work did not undertake an institutional analysis, nor construct a collective point of view on institutional structures shaping food choices in families. Uncovering macro social structural relations such as gender relations or social status, were not the goals of this work, though we saw evidence for these in the way women were predominantly charged with family feeding, and the way low income families suffered disproportionate constraints in relation to other families. We found food choice rules and resources strongly suggestive of institutional structures involved in: constituting family relationships and dynamics; shaping parenting and children rearing practices; configuring employment; public health and nutrition discourses; and shared Kanien'kehá:ka (Mohawk) culture.

Studies investigating family food practices have focused on the constraints of low income families, and food practices as coping strategies (Devine, et al., 2006; Kaufman & Karpati, 2007). However, the diverse family structures and socioeconomic circumstances represented in our study allowed contrasts to show both enabling and constraining conditions of food choices. Moderate and low income families were included by Devine and colleagues in their study of work and family role conflict, but focused primarily on constraints (Devine, et al., 2003). They did not explore the few families who expressed empowerment in their family feeding explained by work-related conditions and resources. By examining enabling resources as well as constraining ones, the explanatory power of using rules and resources to explain varied family food choice circumstances is strengthened.

A socio-cultural study of the food practices of Latino families living in poverty identified how cultural ideas about parenting, well-being and body image are powerful influences on food practices (Kaufman & Karpati, 2007). These researchers also identified family dynamics as being a key in shaping food practices for children. These findings echo our work in terms of the rules of food choices, but also the dynamic aspect of food choices as processes in families. From a practice perspective however, food choice routines not only express cultural meanings that shape food choices, but are practices in which parenthood and family is constituted and reinforced. This practice perspective situates food choices that families desire in enduring routines and social dynamics. Thus, attempts at changing family food choices, and those involving children, implies restructuring routines and their underlying family power relations, systems of meaning and norms.

Our findings should be considered in light of the following methodological limitations. The information on family feeding practices was based on the unique perspective of the person primarily involved in family feeding. Though the recognized key informant on family feeding, it represents only one perspective. Additional family members would have improved the integrity of the information as Paisley found when interviewing significant others of dietary changers (Paisley, et al., 2008). In our work, for example, grandmothers' perspectives could have potentially contributed to the richness and depth of the data by allowing us to explore generational differences. Additional interviews with key informants over a longer period of time could have improved our initial understandings of family food choice routines. Judging from other research, observations of family feeding

could have provided another source of family feeding information, however this method was judged too intrusive by the study community.

The challenges in operationalizing Giddens' highly abstract notions of social structure in empirical work, is recognized (Pozzebon & Pinsonneault, 2005; Stones, 2005). From our initial operational definitions, we deductively identified rules and resources in the data. However, we further refined and detailed our conceptual definitions through inductive analysis, characterizing the kinds of rules and resources from themes identified in the data. There may be other ways of operationalizing different aspects or categories of rules and resources. These characterizations are specific to the families in our study and not generalizable to other families, for example families with adolescent children, or families with young children in a different community.

Our research demonstrated how social structures can generate different constraints on families' food choice practices. This knowledge can assist nutrition intervention programs in promoting healthier food choices by trying to understand how to create enabling conditions could give rise to healthier food choices. This means understanding how the rules and resources in specific food choice contexts generate health promoting food choices. In our study most participants understood the importance of food to health, and were aware of the longstanding community efforts to prevent Type 2 diabetes and obesity. However, the biggest challenges in feeding families were not related to lacking knowledge or value of nutrition and health. Rather employment opportunities and commitments of mothers, expectations on women to carry the responsibility of feeding

families and coordinating childcare, community norms about family life and parenting, and the limited support for lone- parents, created significant constraining conditions.

Conclusion

Social perspectives recognize social processes and forces which recursively shape food choices into patterns. Food choice routines in families and their structural properties strongly suggest that food choices are not individual decisions isolated from a social context, but are consequent to, and constitutive of, the social conditions from which they generate. Public health practitioners and researchers will be challenged to identifying ways to create social conditions that enable healthy food choices without falling back on approaches that rely on transferring information and skills to individuals for coping with disabling family feeding conditions. Furthermore practitioners should reflect on how family food choice practices contribute to the constitution of families, and how modifying food practices will involve restructuring families through rules and resources that reinforce enduring patterns of food practices.

Acknowledgements

Table 1. Participant and family characteristics

PARTICIPANT		FAMILY	
Age	**(n=)**	**Income**	**(n=)**
25-29	6	0 - 25 000	7
30-34	8	25 - 50 000	8
35-39	6	50 - 75 000	4
		over 75 000	0
Education	**(n=)**	don't know	1
Grade 10	1		
High school	7	**Structure**	**(n=)**
College	7	1 parent	5
University	5	2 parent	15
Employment status	**(n=)**	**Number of Children**	**(n=)**
Homemaker	11	1 child	1
Student	1	2 children	11
Full time employment	6	3 children	6
Part time employment	2	4 children	2

Table 2. Translation of Giddens' concepts of social structure as rules and resources involved in family food choice practices

Structures Rules and Resources	Modality via which structures are drawn upon during food choice practice	Examples
Structures of signification		
Rules of meaning	Interpretive schemes that are used to communicate meanings when making food choices	Categories of junk food and healthy food that communicate meanings of health and nutrition involved in making food choices for children.
Structures of legitimation		
Normative rules	Norms as rights and obligations which sanction food choices	Norms related to responsible parenting which are enacted when parents restrict certain food from children (e.g. sugar, coffee).
Structures of domination		
Resources of authority	Capacities and skills which confer control of others during food choice	Mother's whose children obey her by consistently eat together at dinner times Grandparent's who do not respect parent's preferred food choices for grandchildren
Resources of allocation	Capacities and skills which confer control of other material objects during food choice	Cooking skills and know-how which confer power to transform food into acceptable forms for families and children

Table 3. Rules and resources structuring family food choices practices involving children

Operationalisation of 'Rules of Meaning' expressed in values and beliefs about:

Food

Qualities: Good, Healthy, Bad, junk, natural, organic, processed, nutritious, marketed, traditional

Feeding children

Good Eaters/Fussy/Picky eaters/'Snackers'

Parenting: reflecting on providing food to children

Parenting: reflecting on preparing and teaching children for their future food choice (skills, knowledge, responsibility)

Parenting: reflecting on ensuring and maintaining health, prevent disease, reducing risks (healthy body and body shape)

Feeding Families

Enjoying eating by meeting food preferences

Eating together

Community

Messages of healthy eating for diabetes prevention supported by schools, community organisations.

High rate of diabetes is preventable

Obese or overweight children is a problem/risk, socially unacceptable

Operationalisation of 'Conduct Rules' expressed in norms, obligations and expectations about:

Food

Nutrition/health expectations – the types of food children should eat/be encouraged to eat and food to be avoided/limited/eaten in moderation

Feeding children

Parents should exercise appropriate and acceptable amounts of control and power a child has in making food choices (e.g. should not force, should give child independence, should limit choices for children)

Parents should provide, healthy cook meals for their children/limit fast food, processed/convenient food

Professional expertise/recommendations/standards relating to children's food, health & development

Parents should provide food that children like and will eat

Grandparents, extended family members expect to make food choices for children

Feeding families

Three meals daily is the norm

Families are expected to eat together regularly

Meals should please food preferences and provide meal variety for family's enjoyment

Community

Socially acceptable body shapes

Parents/Mothers are responsible for their children's well being

Table 3. (cont'd) Rules and resources structuring family food choices practices involving children

Operationalisation of *Authoritative Resources* expressed as the capacity to make intended food choices.
Decision-making power
Authority to control food choices for family
Authority to control food choices for children in relation to husbands/partners, grandparents and other caregivers
Family support
Having others prepare food for family
Having others feed children
Available time
Skills to coordinate available time for family food choices
Operationalisation of *Allocative Resources* expressed as the capacity to make intended food choices.
Capacity to access food
Money to purchase food, use food services
Transportation to access supermarkets, grocery stores, food services
Land to harvest plant and animal food
Food preparation skills
Skills to transform food for consumption
Experience and know-how in family feeding

Table 4. Example interview quotations illustrating each theme of rules and resources structuring family food choice practices.

Rules of Meaning' expressed in values and beliefs about:

Food

Basically I just want them to have something healthy in their body all the time, and teach them that, you know, good food is good, like "Heath, have some milk it's good for your bones, it'll make it strong." "Drink some water it's good for you", like "Eat carrots, you'll be able to see really, really good!" (Sonia 378)

Feeding children

My daughter [5years old) will pick out what she wants [during grocery shopping] and I can decide, yeah, OK, that's good, or no that's not very healthy for you. (Tanya 186).

Feeding Families

We just always try to get together on Sundays. So we can touch base. And people say, "What are you guys doing?" There is a huge table there, full of food. Not just the meat, there is every kind of salad you can think of. (Alison 287)

Community

I guess like the risks that they'll be sick and that they'll have to actually get needles and just the reason that I want them to be healthy. Like I want them to be normal healthy people who don't have to worry about getting those needles or not feeling well and then for social reasons, if they become obese, people will make fun of them. (Mary 418).

Conduct Rules' expressed in norms, obligations and expectations about:

Food

I was reading, well, I know this too, you should really change, have a different variety because every vegetable or whatever has a different benefit for you, like the colors and stuff. (Debbie 166)

Feeding children

You know and I know, they say, they are always drilling it in your head, "It's important to send your kid out with a good breakfast." (159) I feel guilty walking out the door knowing that his stomach is empty. I feel guilty telling the teachers that he didn't eat. You know 'cause then it makes me feel like, look, like I didn't take the time to feed my kid. (Ann 104)

Feeding families

…'cause I feel guilty sometimes if we're running around and they're eating hot dogs or fries, I feel guilty sometimes, so if we're in a hurry, [I'll choose] something that seems like a home cooked meal, like brochettes with rice. (Kelly 447)

Community

I find that parents should be more involved with what their children eat, but they just give them money and send them to [hamburger stand], or wherever, and they wonder why they are so fat or why they can't run, 'cause their hearts are clogged. (Jessica 307)

Authoritative Resources expressed as the capacity to make intended food choices

Decision-making power

I find it really hard so I am always on a norm making two suppers, one's for him [son] and one is for us. That's how it is, I'd say I'd never do it, but I do it. It's easier than fighting with him. (Rita 471)

He'll just snack all day too, at both [grandparents'] houses. ...rather than eating meals. I think, there's more junk food like hot dogs and McDonald's.(109) I had to have somebody to watch him, his grandmother was available and when he goes there he eats and he stays there for like three hours so then that is out of my hands. (Deborah 241-5)

Family support

He chose rather than to work, to use that time [off work], I mean it gives me a break. He takes the kids to school, he fixes their breakfast in the morning, he fixes even my lunch. So when I get home from work at lunch time it's usually lunch for all of us is there. And he'll start dinner, he'll say, "what are we having?" and he'll take it out of the freezer and he'll start it. But the rest of the year it's my job because he is gone to work by 7h00. (Ann 96)

Available time

The parents are not as involved as they should be, I think with feeding their kids... a lot of them work too so they don't really have as much time. (Jessica 307 - 311)

Allocative Resources expressed as the capacity to make intended food choices

Capacity to access food

Right now I am not working so I go on the first and on the 20th [payment days of social benefit check] and their father's been giving them money he puts it in their account, when I get that sometimes I'll bring them and we'll go get a few groceries, and their snacks for school.(183) I'll try not to buy double, if I have it already I am not going to buy more. I have a freezer downstairs, but it's very rare lately that I could stock up on food. (Lucy 223)

Food preparation skills

You name it, I cook it for them. I like to cook, I cook a lot, I cook too much. But I can anything. You know if they ask me I'll make it at least once or twice, I'll try it, anything. (Elaine 370)

You know when you have to cook for a lot of people, eh? So I've been in a few situations where I'm not, it's not, it's not a pleasurable experience cooking, I'm not a cooker. I like it, but I am not a cooker. (Megan 409)

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DISCUSSION

Returning to the origins of the research question

This research project was stimulated by discussions within the KSDPP concerning the observation that some families in Kahnawake were not 'in the position' to make healthy food choices. Several understandings of this resistance to adopting healthy eating were proposed. Not all families were perceived as having the opportunities to make healthy food choices a top priority. Often it was stated that some parents needed to have a better understanding of nutrition and its importance in preventing disease in order to 'buy into' healthy eating. Other explanations identified limited incomes of families on social assistance, or the wealth of other families permitting frequent eating out from fast food restaurants. It was also explained that working mothers faced time and energy limits, since coordinating children's organized activities left little time for mothers to cook. These reasons, among others discussed within the project, seemed plausible. However a number of families seemed to do good job making healthy food choices for their children. Given that families and their food patterns were apparently diverse, understanding the complex constellation of factors that patterned family food choices appeared as an important endeavour.

The assumptions underlying these discussions were that families were not equally positioned in ways that supported healthy eating. How could we examine these inequalities reflected in the way families made food choices? A review of the literature on how family contexts could be studied to explain their dietary patterns revealed little theoretical guidance. Most research focused on factors and determinants influencing particular types of dietary behaviours or intakes. Though descriptive about the multiple factors that can

influence specific behaviours, this research could not help explain why certain patterns or frequencies of behaviours come about in the first place. The research did not address the processes by which families configure their food choice patterns, and how the context of their daily lives was involved in this process.

This research project first aimed to develop a conceptual framework to theorize how family context shapes dietary patterns. This culminated in the theoretical proposal for re-framing dietary behaviours as food choice practices (Delormier, Frohlich, & Potvin, 2009). The proposition that food choices are social practices, and expressions of a social structure and agency interplay, offers a sociological perspective of food choice to public health. This new perspective reorients the study of food choices from a tight focus on discrete dietary behaviours, toward one where food choices are approached as social activities structured and dynamically integrated in the context of everyday life.

Empirical characterizations of family food choices as social practices

Empirically demonstrating the framework's proposal involved two studies, each designed to demonstrate that family food practices can be ontologically established as social practice from a theory of practice perspective. The first study set out to identify and describe food choice practices as routinized family activities, bringing to light aspects of agency reflected in purposeful choices, and social structure as the social meanings and obligations that distinguished food choice routines. The second study sought to identify the rules and resources of food choices, as well as explain how these configured constraints and

opportunities by examining one particular family food choice routine - creating regular meals and snacks.

Results of the first study suggest that food choice practices in families are observable in recurrent activities. The analysis of the 20 family feeding accounts focused on usual food choice activities as indicative of routines. Evidence for five kinds of routine food choice practices was presented in all families and their variations described. Routines in families were oriented toward 1) Creating regular meals and snacks for children; 2) Ensuring that children ate; 3) Monitoring children's food intake for health; 4) Teaching/shaping children's food choices for the future; and 5) Using food services. To the best of our knowledge, this is the first time family food choices have been empirically characterized and described as routinized social practices in families.

Food choice routines dedicated to creating meals and snacks were the most richly described routine across all families. Though variations existed, the importance of providing regular nourishment was expressed in families' daily endeavours oriented to creating meals. Routine food choices oriented to 1) ensuring that children were fed properly each day; 2) monitoring what children ate according to health principles and; 3) teaching children and shaping food choices reflected parenting aspects of family feeding. Finally, meals purchased from food services were distinguished as a practice due their regular occurrence in families and their distinct meanings and purposes. These five routines were separated in analysis in order to show their different purposes and meanings. However as activities, feeding practices were part of a whole system of activities carried on in families.

The second study sought to identify and describe the meaning rules, conduct rules, and resources (i.e. allocative and authoritative) of family's food choice practices. With these characterized, we then aimed to understand how constraints and opportunities routinely experienced in families were structured in relation to rules and resources.

Meaning rules referred to systems of beliefs and values that were interpreted and communicated through family food choices. Food choice meanings were organized as food qualities, aspects of feeding children/parenting, aspects of feeding families, and community-related aspects of food. Food choice practice rules communicated meanings associated with being a provider, family member, child, caregiver, mother, parent and living in the community. Rules of conduct were described and organized according to the similar ideas as meaning rules (food quality, feeding children, feeding families, community). Conduct rules have sanctioning qualities and express obligations and expectations. Positive or negative sanctions accompanying food choice practices evidenced the normative character of conduct rules by endorsing acceptable or appropriate food qualities, ways of feeding children, ways of feeding families and community food ways that structure food choices.

Resources were identified as providing families with power to make desired food choices. Allocative resources conferred control to families over material objects required for food choices (money, food, land for planting, farming or hunting, commercial food sources, vehicles, skills to transform food). Authoritative resources involved the authority to assert control to make food choices in relation to others. One's authority could be limited in relation to others. Family support was an authoritative resource because others assumed

responsibilities and tasks of family feeding. Decision-making authority to control food choices for other family members was another resource, as was available time in which one could accomplish feeding tasks, and skills to coordinate time.

The identification of authoritative resources posed challenges, given its abstract definition and the subtle ways in which power and control in families is negotiated. The caring and nurturing aspects of family feeding are not easily conceptualized in terms of authority or control over others. Power dynamics in families are complex. Family members can impact food decisions directly or indirectly through the consideration family food providers place on pleasing individual and family food preferences. Furthermore, time and time use skills were key resources which enabled family food responsibilities. This operationalization does not directly address controlling others, but may be an expression of the limited control participants had in relation to others who demanded their time such as employers, personal commitments, family and children's activities.

Identifying and empirically demonstrating rules and resources were essential to the analysis of how food choice opportunities and constraints are structured. Each of the families included in our study experienced challenges and opportunities in their daily food choice practices. However, in comparing and contrasting accounts of their routines, and looking more holistically at each family's daily experiences, we found the severest constraints to be structured by limited access to multiple resources. Lone families on incomes limited by social assistance or low paying jobs expressed the most challenges. In these families, money to buy food, but also family support, was limited. Nonetheless, these women assumed most childcare and familial responsibilities. However, not all lone parent

families were as severely constrained. Less severe constraints in these cases were structured through different accessibility to resources associated with higher paying, more stable employment, and regular family support. Despite differential access, in all lone parent families balancing work or finding employment, with childcare and family life, limited available time and constrained capacities to feed families in the ways they desired.

In other families, ongoing stress and frustration was characteristic of daily meal routines that were clearly structured by severe limits on available time. Time constraints came about in different and significant ways. In families with two parents, both involved in full-time employment, time limits for meal creation food choices were structured in relation to commitments toward work. In others, where only one partner worked, full-time homemakers managed an exceptionally heavy schedule of programmed family and child activities in addition to regular family tasks. Heavy childcare responsibilities further limited available time in families with more children and/or with a toddler or baby. Within these constraints, having a partner who regularly contributed to creating meals was enabling, or when one could not depend on this form of support, another challenge. Two incomes or one high income allowed families to purchase food from restaurants more frequently for the purpose of convenience in providing meals, managing limited time, and for family enjoyment and pleasure. Skills to cook and plan were enabling resources for some, but constrained those who did not like to cook, even if they had skills.

In families where creating meals was generally experienced with a sense of satisfaction and mastery, we explored enabling circumstance which we found to be similar among these families. Being full-time homemakers, with husband/partner who worked

within the community, structured adequate allocative resources and available time to coordinate family feeding. Furthermore these participants expressed enjoyment in creating family meals despite the daily challenges this presented, and did not see these as major constraints but rather part of the territory of family feeding.

Detailing accurate configurations of resources and rules associated with distinct circumstances of constraint or opportunity was not possible given the number of families we could compare and contrast. However examining the modes by which families used resources, and what this meant to them, made it possible to distinguish amongst constrained and enabled conditions. Commitment to employment or homemaking was linked to severe and distinct types of time constraints. The finding that lone parent families were not constrained in the same ways could be explained by their differential use and access to resources. Families with adequate access to multiple resources experienced family meals with comparative ease. Additional cases, or more in-depth information from each family, would have provided information to give more accurate configurations of resources and rules structuring distinctive styles of constraint and opportunity in particular family feeding situations.

The findings present evidence that food choices are routinized social practices situated in, and contributing to, daily family life. We have illuminated the features of agency as the practical orientations, and expressed motivations implicit in food choice practices that intermingle with structures as meanings, norms and resources constituted in the context of food choice practices. We have characterized routinization in the recurring practices that contribute to constituting families as social systems. Finally we have

demonstrated the structuration of food choice practices by explaining the challenges and opportunities of creating meals and snacks in families as structured by combinations of food choice rules and resources. Thus, our exploration of food choices in families leads us to conclude that these are social processes and social constructions.

Theory of practice perspective of food choices: innovative directions for studies of food choice in public health

Food is a prism

> *"Food is a prism that absorbs a host of assorted cultural phenomena and unites them into one coherent domain while simultaneously speaking through that domain about everything that is important"*(Counihan, 1999, p. 6).

When Carole Counihan speaks of food as a prism she exposes how profoundly significant food is to social life. Food sits at the intersection of many social processes. The production, distribution and consumption of food, for example, can reveal much about culture and society (Germov & Williams, 2004; Mennell, et al., 1993b). Food connects us to people and places, and deeply shapes our lives through processes that are global, local, intimate and biological. In considering food choices, we are dealing with a host of wonderfully complex social phenomena. This thesis aims to integrate some of this social complexity into the study of food choices by offering a theoretical proposal that examines food choice as social practices that occur in interaction with socially structured circumstances, which can constrain or enable family food choices.

This social practice perspective was developed to guide research that would inform the KSDPP, a community-based health promotion project. Within that project, intervention

facilitators from the community, along with academic researchers, work collaboratively to design well-informed research and intervention activities specific to health promotion. As a researcher and a nutritionist within this project, I found very little nutrition research that had looked at families as dynamic processes in relation to food choices. Families were usually defined as determinants or influencing factors in the dietary behaviours of children. Others have noted in their conclusions regarding social determinants of food choices that very little is known about family processes and how these shape dietary patterns of interest to nutritionists (Coveney, 2002; Stratton & Bromley, 1999; Wardle, 1995).

One of the challenges in this thesis was navigating the field of sociology to identify concepts and processes that would be translatable and practical for community-based nutrition interventions for families in real life settings. Social research on domestic consumption patterns, divisions of labour, food production, and food symbolism was helpful in investigating these activities as socially structured and constructed (Carrigan, Szmigin, & Leek, 2006; Kaufman & Karpati, 2007; Moisio, Arnould, & Price, 2004; Valentine, 1999). Research which looked specifically at family feeding as a socially constructed practice provided further guidance on reframing family feeding as a food choice practice (Charles & Kerr, 1988; DeVault, 1991). Some researchers have examined nutrition inequities in families as part of complex social relationships whose understanding can provide efforts that target the social roots of nutrition problems (Coveney, 2004b; Crotty, 1993; Murcott, 1995; Schubert, 2008; Travers, 1996). This thesis builds on these directions by developing theoretical tools that aid in studying food choices as family processes and patterns. These patterns express a relationship of people's choices with the

socially structured conditions of their lives. It recognizes that socially structured circumstances are chosen by families, yet through their food choices, families are continually being structured by these, while reinforcing the same circumstances of their practices. Below I discuss how the framework contributes to an innovative understanding of food choice to nutrition.

Re-framing food choices from risk factors to social activities

To begin, the thesis proposes looking at food choices as activities embedded in everyday life. The idea of food as practice captures a wide range of food-related activities that occur in real life settings. It is precisely this contextualization of food choices that has eluded nutrition perspectives of food choice in public health.

Due to the primary interest in food as a source of nutrients, nutrition science tends to regard food in terms of dietary behaviours. In order to study the impact of food choice on nutrient or health profiles, dietary behaviour for example, fruit and vegetable intake, fat or fibre intake, etc. are singled out, isolated from context. Re-framing food choices as practices, by contrast, integrates food choices into the ongoing activities that occur every day. For example, understanding children's fruit and vegetable intakes would require looking at the family food practices that condition children's fruit and vegetable consumption. Food choice practices are always oriented toward purposes that make sense in relation to their contexts. Isolating specific food choices as dietary behaviours severs the links with social contexts, thus removing what is socially significant about eating.

Routinized food choices and socially structured conditions: two aspects of the same phenomenon

It is helpful to consider the contributions of the Food Choice Practice Framework as two interrelated aspects of food choice practice. The first aspect concerns food choice as practices, recurrent activities or routines, and expressions of agency. The second aspect focuses on the social conditions and structured circumstances of food choice practices. Conditions, as sets of rules and resources, orient our perspective toward the landscape of family food choices as meanings, norms and distribution of resources structured beyond the immediate control of families, yet constantly implicated in what families do.

Aspect 1 - Food choice practices as routinized activities

Examining family food choice practices as routine family activities offers a novel way to explore food choices as patterns. Recurrent social practices are what Giddens explains as routinization. In our study, we explain recurring food choices as the expression of a recursive relationship between the food choices practices of families and their food-related circumstances. Examining recurrent food choice activities, and the purposes toward which they are oriented, leads us to pursue food choices within the context of day to day life.

The goal of public health nutrition is to promote healthy patterns of food choices in populations. Understanding the processes that bring about food patterns in populations is certainly a step toward that goal. By proposing food choices as social practices we have a theoretical proposal for food choice patterns in populations as recurring practices expressed by social groups in particular structured circumstances.

The interest in the notion of food patterns is growing in nutrition epidemiology (Haines, Popkin, & Guilkey, 1990; Hu, 2002; Krebs-Smith, Cleveland, Ballard-Barbash, Cook, & Kahle, 1997; Millen et al., 2001). The food intake patterns of interest however are based on frequencies derived from reported dietary intake data. Food intake patterns are formulated mainly to understand how clusters of food items relate to nutrition or disease related outcomes. Patterns formulated in terms of new risk factor variables are different from patterns that are generated in relation to social contexts.

Socially patterned food choices are phenomena displayed by social groups, family groups or peers. Explanatory frameworks for the generation of dietary patterns in social settings have not yet been proposed. The Food Choice Practice Framework offers a theoretical explanation for food choice patterns as routinized social practices. We identified different kinds of food practice routines in families according to the purpose and as recurring activities. In terms of their contribution to family life, they are holistically integrated. Routinized food choices suggest that the recurring daily activities in which food choice are shaped are pertinent targets for dietary change interventions.

Researchers from Cornell University have recently studied eating routines (Jastran, et al., 2009). This research represents a body of work on food choice from an *interpretivist* standpoint which is concerned with subjective understandings of eating (Sobal & Bisogni, 2009). Routines, these authors explain, are the result of the way people respond to the influences and constraints of their daily lives. They suggest that these concepts of eating routines are useful for capturing the different ways in which people construct regularities in eating practices. Their findings rest upon inductive analysis to draw out a conceptual

representation of how participants construct their food choice thoughts, feelings and actions as a result of their past cultural, social and personal experiences. This view, however, does not assume an equally important place for social structural conditions to shape routines. Instead, "routines are crafted and 'owned' by people as they choose among possible options in their recurrent eating situations and fine tune the solutions that work for them" (Jastran, et al., 2009). From this perspective, routines are believed to be the result of conscious rationalization for coping with the constraints. From a social practice perspective, however, routines are theoretically explained through the recursive relationship between practice and social structure. Routines are enduring forms of practice and the consequence of choice (agency) within structured possibilities.

The difference between a practice perspective and an *interpretivist* perspective may seem subtle, but it is not. The implications for bringing about dietary change suggest divergent directions. From the subjective perspective, "In order to change their behaviours in accordance with health recommendations, people must change their routines" (Jastran, et al., 2009). This relies on individual-focused interventions to get people to change and leaves the structural conditions in which people cope, a given.

From a practice perspective, routines are recursively related to social structure and not a result of the filtering of social structural influences through cognitive decision-making. People are mostly tacitly aware of socially structured conditions within which they orient their choices. This tacit awareness of structured conditions which constantly informs practice works at a level of *practical consciousness* (Giddens, 1984). Because practical consciousness operates in the moments of action and is always integrated in the flow of

situated activity, it is not possible for social actors to articulate into words the reasons for what they do (1984). Giddens distinguishes practical from *discursive consciousness* which he associates with the knowledge people use to provide reasons for what they do when asked. Thus from a practice perspective, routines are patterns of practices that are recognizable over time, recursively organized in relation to social structures, and not the result of cognitive strategizing. The distinction implies that bringing about dietary change through modifying social structural rules and resources, requires altering the structure-practice relationship, to generate different routines. This perspective contrasts with the approach mentioned above that rests on getting people to decide to change their routines.

Aspect 2 - Rules and resources as structural features of food choice contexts

The characterization of food choice rules and resources offers an organizing concept for appraising structural aspects of food choice circumstances in terms of symbolism, social norms and facilitating resources. Structure, as rules and resources, is of particular interest as it facilitates an explanation of the constraints or opportunities experienced by families in accomplishing their desired food choices. It should be noted that this structuration analysis approach relies on the perspectives of those whose practices are of interest (Stones, 2005). In other words, since social structures are only evident when they are constituted in practice, one cannot examine structuration without the framing of lived experiences. Two applications of using the concepts of using rules and resources in analyzing food choice are discussed next.

Aspect 2 - Rules and Resources – For integrating personal and environmental determinants of food choice

The knowledge we have of personal food choices and their determinants is far more developed than our understanding of collective determinants that structure eating behaviours (Raine, 2005). Increasingly, research is being oriented toward understanding structural determinants of dietary behaviours. Studies that examine structural features of diet almost exclusively refer to area features such as food availability and access, or characteristics of people living in certain areas derived from aggregate measures of socioeconomic variables. This research is credited with identifying new variables and innovative ways to measure characteristics of places that influence dietary intakes. Apart from a few studies that incorporate the perspectives of people about certain places (Moore, Diez Roux, & Brines, 2008; Moore, Diez Roux, Nettleton, et al., 2008), most research does not include lived experiences as part of research on food and places. Focusing only on features of places as determinants of dietary intakes does not take into account the processes by which food choices are woven with the places through agency expressed in peoples' practices.

The Food Choice Practice Framework offers a way of examining this process. Studying people's food choices in everyday contexts is facilitated through considering both peoples practices and structural constraints in the places they live. The analysis of structural constraints and how these are configured is aided by paying attention to rules and resources, the manifestations of social structure in practices. From the perspectives of family food providers, we found that we could appreciate how meanings and norms, and

diverse resources could differently enable the routine practice of creating meals in diverse families in one community.

Aspect 2 - Rules and resources – For re-framing socio-cultural influences of food choice

The concept of social structure as rules and resources provides a way to integrate symbolic and material aspects of food choices which have often been studied separately (Murcott, 1988). Rules capture the meanings and social norms structured in peoples' experiences and knowledge, and encompassed in notions of culture. Resources are material objects and power, which are differentially distributed in society, and hence variably accessed by people. The notion of resources from structuration theory is quite complex and considers resources as material objects and authority drawn upon in practice, facilitating power and control depending on the ways people access resources in different contexts. Socio-cultural perspectives study both material and social aspects, but do not theoretically integrate these, tending instead to distinguish symbolic or cultural features from social relational features that explain asymmetric power relations. Cultural and social aspects of food choices can be integrated as social structural rules and resources of food choice practices. An example is discussed below.

Kaufman and Karpati's (2007) research is a fascinating look at food practices of low-income Latino families living in Brooklyn. The study effectively exposes how fluctuating economic conditions (low income jobs, government benefit programs, using credit) and food sharing with family and friends shaped a monthly cycle of unstable purchases and consumption patterns possibly favouring eating patterns that impact

childhood obesity and health. The authors explained how a family's use of food-related material resources were filtered through cultural notions symbolizing parental identity, well-being and food as gratification tied to personal histories of food insecurity and poverty (2007).

Re-framing socio-cultural influences as social structural rules and resources provides a coherent explanation for the observed patterns of food choices in the families. Cultural notions of food, parenting, and body image identified by Kaufman and Karpati, constitute systems of meaning reflected in the families' food practices. Beliefs regarding food and feeding children expressed by other family members, as well as health profession systems of meanings, often conflicted with the mother's view. These meaning systems represent structures of signification. The distinct feeding 'roles' which the authors identify of being a parent, mother, father, family and friends were identified as configuring distinct kinds of eating patterns where children were involved. 'Roles' carry notions of expectations and obligations of feeding children and reflect legitimation structures which become apparent in the ways family members feed children. Authoritative resources, along with conduct rules, structured power relations that exerted control over what children ate in relation to family members and friends. Power relations among a number of family members had a significant impact upon children's food choices. Material resources focused on economic power to buy food, which is only one kind of material resource, albeit probably the most important in industrial/commercial food systems. Other resources, not identified from the study were the control people had in accessing shopping environments

or social benefits programs which the authors did acknowledge as significantly shaping food acquisition.

Structuring food choices – creating families

The structuration analysis of family meal creation patterns revealed how families were positioned in circumstances by the food choice resources and the meaning and obligations families expressed. Circumstances generated characteristic constraints and opportunities which we understood as shaping routine food choice practices. The analysis of constraint and opportunities identified the severest constraints among families with limits in most of the resources identified as necessary to adequately create regular meals and snacks. Inadequate income to purchase desired food, limited support from extended family involvement, and lone parenthood were associated with ongoing struggles and worry in these families. From the perspectives of the participants, food choice purposes were oriented toward providing basic meals that children would enjoy and eat, as well as meeting their parental obligations. Family feeding was a daily struggle. When we consider this particular family situation, meanings and norms of health and nutrition were evident in their food choices. These participants were aware of nutrition principles, food guide recommendations and child feeding techniques. However, limited resources meant no room to experiment with new food, or the multiple trials recognized by professional expertise as essential for children to acquire new taste preferences since this meant food could go to waste. In these families, keeping meals simple to reduce work and save time, and pleasing children's food likes were the practical orientations for the circumstances. The implication for nutrition interventions with resource limited families means addressing how

circumstances could be created to support these families, for example, with improved income and/or job status, or providing assistance to lone parents to reduce the responsibility of household and feeding tasks.

In stark contrast were families who expressed mastery and satisfaction in creating meals. These women were homemakers by choice who confidently accomplished family meals with many food preparation skills, adequate incomes and personal transportation. In these families, husbands/partners had stable employment in the community where salaries are tax exempt, and jobs are mainly in the public sector related to community services and local government. These families displayed control over family food choices enabled by resources, and were constrained mainly by obligations of figuring out the meals family members would enjoy. Some constraints were evident in the attention paid to food budgeting and limiting eating out, however these strategies were matter-of-fact and did not raise serious worry. Nutrition, diabetes prevention, and feeding children properly were notions that did challenge families. Uncertainty over proper ways to feed children was continually a part of the family feeding landscape, and manifested in contradictions between what participants felt they should be feeding children and how children were actually eating. Overall these families achieved a sense of satisfaction in the way they created meals in families.

Looking at contrasting family circumstance and resources accessible in practice facilitates understanding how the power to make desirable food choices can be differently structured. Considering rules at the same time it becomes clear how in situations of limited resources, food choice purposes express the value of providing regular nourishment and

providing what children are sure to eat and enjoy. Even though the food was recognized as being important to a family's health and nutrition in both constrained and enabled circumstances, it was expressed differently. In families who described general satisfaction with meal creation food choices, uncertainty lurked over whether a child was properly fed. In the families struggling to acquire adequate food these kinds of concerns were far less important.

Families as structured and structuring processes vs families as food choice determinants

Family food choice patterns contribute to the creation and continuity of family life. From a structuration perspective, families do structure, and are structured by their routine food choices. Structuration theory explains that institutions which continue through time and space, and constitute society, are structurally ordered and recognizable in the form of enduring practices. Our empirical work described family food choices as routinized activities. Food choice patterns can then reinforce the kinds of food families usually eat, and impact upon their health and nutrition status. The other aspect of the recursive relationship suggests that through patterned food choices, families recreate structures which are also the means by which agency is expressed. As we saw, family food choices expressed and reinforced such meanings and norms about family life, being parents, raising children, and being a mother. Thus family meals are not standardized events, but are shared ideas of what constitutes a family. Making a child's lunch is not separate from keeping one's obligations as a parent to provide for children or from the care expressed in pleasing food preferences. This perspective supports understanding families as created through day-

to-day food activities. The theory of structuration provides a theoretic proposal to explain how food as a social practice recursively organizes groups of people into families.

Dietary change and families

Public health nutrition interventions that target families as important contexts for children's nutritional status are faced with a number of challenges. If dietary change is the goal of promoting healthy food choices in families, this research suggests that dietary change involves re-structuring families, since food choices contribute to their constitution. Dietary change was not studied in our case studies, and so the types of structural changes that could alter family food choice practice routines could not be identified with certainty. However, two studies did address dietary change in families as social issues. In both, dietary change was linked to disease management and revealed interruptions to what had come to be expected as normal family life. The family experience of managing chronic disease through diet (Gregory, 2005), and making efforts to eat healthier after surviving breast cancer (Beagan & Chapman, 2004) introduced new symbolism and norms into the family food context. Family food choices carried new meanings related to managing or preventing disease, as well as the expectations family members felt about appropriate family responses. The power to bring about change in families food routines involved power dynamics and negotiation. Thus a restructured family context brought about by motivations of disease management or prevention, shaped food choice practices that were either supported or resisted (Beagan & Chapman, 2004). These studies support the central place of family, as a collective experience, reinforced through routine food practices, and the need to understand how structural features of families can bring about dietary changes.

Family food choice practices: Expressions of Collective Lifestyles

The Food Choice Practice Framework provides an example of family food choices as *Collective Lifestyles*. Collective Lifestyles re-frame health lifestyles from a profile of discrete, de-contextualized health-risk behaviours, such as diet, exercise, and smoking to one where lifestyle is the expression of a collective experience. Collective Lifestyles is based upon theories of practice, and brings together notions of social structure, agency and social practice in order to explore how the social conditions of people's lives generate patterns of experiences or lifestyles (Frohlich, et al., 2001). Lifestyles are collective because they express similar choices generating from the common experience of living in shared structured circumstances. Collective Lifestyles recognize that people's choices do impact their health. However, choices are framed within the context of lived conditions. For example, housing, employment, and education opportunities can structure constellations of life chances that are beyond the immediate control of an individual. Viewing healthy lifestyle as a collectively shared social practice, and expression of a relationship with structure, invites an analysis of the meanings and resources associated with places people live. This view also encourages an understanding of how places as structured contexts generate practices which differentially impact health, contributing to health inequality gradients (Frohlich, et al., 2001; Popay, et al., 1998; Williams, 2003).

The Collective Lifestyles heuristic inspired thinking about family food practices as collective lifestyles. It stimulated thinking about how families as groups of people whose shared circumstances were expressed in family food and eating patterns. It also addressed

inequalities which resonated with this study's interest, in understanding why families seemed differently positioned to make healthy food choices. The empirical demonstration of food choice practice routines supports these as the expression of collective family experiences. Furthermore, structuration analysis demonstrated how families were differently enabled to make food choices, which could be understood by considering the context of family food choice practice. The framing of food choices as social practices and their empirical characterization contributes an understanding of family food choice practices as an example of Collective Lifestyles.

Food Choice Practice Framework: Operationalization of Structuration Theory

Examining family food choices as social practices demonstrates one way of operationalizing some of the central concepts of Structuration Theory. Using Giddens' Theory of Structuration for empirical work is recognized as posing significant challenges. Difficulties stem from the complexity of the theory's concepts and general propositions which operate at a high level of abstraction (Hardcastle, et al., 2005; Pozzebon & Pinsonneault, 2005; Stones, 2005). Giddens offers structuration theory as a sensitizing device to the study of social phenomenon (Giddens, 1984). His concern with the ontology of society explains the little attention paid to epistemological questions (2005). Structuration Theory is not wedded to any one method, nor is any clear methodological approach proposed for empirical work. The operationalization of Giddens ontological concepts to study empirical phenomenon is not straight forward.

Structuration Theory has often been applied to study management and organizational processes. A large body of work has developed around applying the theory to study information technology practices (Pozzebon & Pinsonneault, 2005). It has been used to understand nursing practice (Hardcastle, et al., 2005), and the coordination of inpatient healthcare (Beringer, Fletcher, & Taket, 2006). Structuration Theory clearly is a framework for understanding organizational processes, however its application in examining processes in families is new.

Family feeding practices are unique in character, being situated within caring and intimate relationships, and are not easily approached as coordination, management or professional practice. Nonetheless, family perspectives do recognize families as created in their recurrent practices (Bernardes, 1997; Morgan, 1996) , and food practices specifically as key social processes that contribute to the constitution of family life (DeVault, 1991; Gregory, 2005). Furthermore, family food practices have been characterized as processes linking women who feed families into broader social structures of gender, class, commerce, policy and discourse underlying nutrition inequities (Travers, 1996). These theoretical developments and empirical work supported studying family food choices as social processes whose continuity through space and time contributes to the constitution of families (Delormier, et al., 2009).

The operationalization of social practice, social structure, and agency contributes an application of using Structuration Theory. As a sensitizing device, Structuration Theory provided an innovative conceptual understanding of food choice practices as the interplay of social structure and agency. Agency was expressed in the purposeful orientations of

family food choice practices, their intentionality and as expressed desires. Social structure was understood as the social rules, beliefs, values, expectations and obligations associated with different contexts of interaction, and the resources, both material and authoritative, they could capably harness. Family food choice practices are examples of the skilful procedures, methods and techniques appropriately performed by knowledgeable social agents (Giddens, 1984). Structuration Theory is challenging to operationalize, but proved useful in orienting an analysis to the material and symbolic aspects of food choices and understanding family food choices as recurrent processes conditioned by structural rules and resources. Moreover, the routinization of family food choices demonstrated the central place of food practices as recurring family activities. Recurring activities underlie the constitution of families.

It is important to note that the concept of authoritative resources was particularly difficult to operationalize. Giddens explains two aspects of resources as capacity derived from being able to control materials, or to control other people. The notion of material resources directs the examination of the ways physical objects are used, thus we can 'see' how access to money, for example, conveyed transformative power to families to acquire food. Operationalizing authoritative resources posed challenges. In examples from empirical work, the notion of authoritative resources had different interpretations (Pozzebon & Pinsonneault, 2005; Stones, 2005). The notion that resources confer control over others was difficult to operationalize against family food practices. Power relations in families are complex, and shift in relation to others present when food decisions are made. Thus, the concept of authoritative resources was informed primarily by inductive analysis

for a more grounded understanding of authoritative power in family food choice practice. The operationalization of authoritative resources was based on analyzing how participants displayed control in making decisions for others in the family. More work is needed to better conceptualize authoritative resources in families, and how these relate to power relations in families.

Family food choice practices: Expressions of lay understandings of socially structured experiences

The study provides an example of exploring relationships between agency and social structure through lay knowledge. Lay knowledge refers to the understandings people express in discussing their life stories and experiences. In narratives, which are forms of lay knowledge, people articulate the meanings of their lived experiences. These lay understandings provide a way for understanding how people interact with the social structures of their lives and how this impacts their behaviours and actions (Popay, et al., 1998; Williams, 2000). Lay knowledge has been examined for understanding how 'places' shape peoples actions and contribute to health inequalities.

> *Attention to the meanings people attach to their experience of places and how this shapes social action could provide a missing link in our understanding of the causes of health inequalities. In particular the articulation of these meanings – which we refer to as lay knowledge – in narrative form could provide valuable insights into the dynamic relationship between human agency and social structure* (1998, p. 636).

A person's own understanding of what they do in the world, in essence, co-constitutes the world (Williams, 2000). An exploration of people's practices told from their

perspectives offers social scientists a window into the processes through which people transform the world. Perspectives of family feeding experiences were the key sources of information for exploring the ways families interacted within the social structures their daily lives, and how this gave rise to particular forms of food choices.

Two studies have examined structural relationships of family food practices through lay knowledge or narratives. Both studies were concerned with how social inequalities in health might be generated by variations in food patterns observed across socio-economic status groups. Coveney (2004b) found that families in high income suburbs tended to discuss food in medical and nutrition terms, a discourse not reflected in families from low income suburbs, whereby food was discussed in terms of children's outward appearance and how they functioned. Thus, differences by class were revealed in the ways parents articulated their understandings of the food and health relationship. In another study of health-related practices, class differences in food-related health beliefs, what we recognize as social rules, were found (Calnan & Williams, 1991). Narratives pointed out structured features of family life: economic and family constraints experienced by women; work conditions; 'lifestyle' influences; dual roles of employed women; and personal food preferences that shape household food consumption. Thus, contrasting the narratives of people from different social class backgrounds revealed how food choices vary by social class background, and are structured by beliefs as well as resources.

Our study of food choice practices did not compare families from their social class backgrounds. The study was interested in exploring people's experiences in order to understand how their different family circumstances shaped food choices. Our analysis

used lay knowledge to better understand socially structured constraints and opportunities. Using accounts of family feeding experiences to understand structural relationships contributes an example to research based on lay knowledge.

Study limitations

The findings from the study should be considered in light of the following study limitations. The first involves the *post hoc* operationalization of social structure as rules and resources, and food choice practice routines. The initial analysis used operational definitions developed from Giddens' concepts of rules and resources, and social practices. The terms used to analyze food choices were operationalized, working from Giddens definitions and informed by sociological perspectives of food practice. As analysis proceeded, operational definitions were further developed and informed by the data. As a result, themes of social rules and resources were inductively characterized from the data, but theoretically guided by the Giddens concepts. Findings from the both deductive and inductive analysis were periodically validated with members from the community and with academic researchers to augment the integrity of the interpretations. Distinguishing among the kinds of rules and resources inductively renders them specific to the families in this study. It is possible that one would identify different or additional categories of rules and resources in another study. However the deductive operationalization of rules and resources would likely lead analysis to the symbolic and material aspects of food choices in other families.

The structuration analysis was restricted to the micro-level of the family. The manifestation of social structure also remains at the level of families. It is therefore not possible to identify the broader structures, or institutions in which rules and resources were reified. Instead, our understanding of significance, legitimation and domination structures rests upon identifying the modes by which structures were instantiated when drawn upon in practices. We therefore did not attempt to identify social structural institutions; rather, structures were the communicated systems of meanings, social norms and ways of accessing resources that facilitated family food choices.

Our analysis of family feeding relied on the unique perspective of the person primarily in charge of the family feeding related work. It could be argued that family was conflated with the individual informant. Though previous sociological research consistently identifies one person, mainly the mother as the primary family food coordinator and key informant, other perspectives could have contributed information. Additional family members would have improved our understanding of food choices as dynamic processes in families. In terms of the depth of the information from each family, one or two interviews were conducted to understand each family's feeding activities. Observation of family feeding has been used in other studies as a different source of information. In this study, community concerns about the intrusive nature of observation in families excluded the possibility of observation.

The data from which we worked to explore family food practices are somewhat limited. The number of families who took part in the study could be considered a minimum in relation to other studies where family feeding was investigated. Usually families range

from 12 - 40 families. This study invited 20 families to share their experiences. This number was adequate for being able to identify some food choice routines across families and to examine the most dominant differences among structured family food choice conditions. However the empirical characterization of food practice patterns and circumstances could have been brought more sharply into focus with additional families or additional interviews among the 20 families.

In light of these limitations, we note the strengths of the theoretical foundation set out by operationalizing key concepts from a comprehensive theory of practice to study food practices. We also note that family feeding has been demonstrated as a set of activities integral to family life by previous sociological research, and as a site of the reproduction of social organization. Thus family feeding activities were pertinent processes for an analysis of structuration. Finally, the methodological approach built on previous work studying lay knowledge of social practices and their social structuring contributes to the study strengths, in light of other limits in methods.

CONCLUSION

Relevance of The Food Choice Practice Framework

The purpose of this thesis remains important because it aims to re-orient thinking in public health nutrition about food choices as social processes. This research re-frames food choices from the predominant view as unique dietary behaviours, to one of contextualized activities or social practices. The need for new food choice concepts in public health was identified from the literature on behavioural nutrition interventions whose modest successes have urged new understandings of the collective determinants and processes that shape food choices (Cox & Anderson, 2004; Raine, 2005). Effective dietary interventions to improve nutrition are a priority for public health since diet plays a key role in the prevention of a number of chronic conditions and diseases which affect significant proportions of the population. Good nutrition is foundational for overall health.

Addressing gaps in knowledge about food choice in public health

In public health, and health promotion, there has been a curious lack of consideration paid to the social patterning of food use which, by comparison, food marketing analysts closely monitor. On a website dedicated to the food and beverage industry, for example, timely reports describe emerging food consumption trends and their associated demographics to inform industry on profitable opportunities to shape consumer food choices ("News Headlines: Financial & Industry," 2010). By understanding the needs, consumption patterns and significance that particular kinds of food items hold for consumers, companies can tailor their products to align with target population eating patterns.

Public health nutrition could learn from marketing's regard of food choice patterns as emergent and characteristic of population groups. However, public health nutrition has tended to address food choices in terms of individual dietary behaviours that people should adopt to improve nutrition. Examples of such behaviours are the consumption of low-fat milk to reduce dietary fat intake, eating orange coloured vegetables to improve vitamin intake, or reducing the use of processed foods to improve sodium intake. Approaches based on recommending dietary behaviours leave little opening for comprehending how dietary patterns, which fail to meet nutrition standards, become established in the first place. Better understandings of the processes which shape food choice patterns are promising directions for nutrition improvement strategies that aim to transform population food choices (Barker & Swift, 2009; Cox & Anderson, 2004).

This thesis provides a theoretical proposal to address some of the limitations in current food choice concepts used in public health nutrition. It proposes a practice theory perspective of food choices. Practice theories view human action as interplay between agency and social structure. Building on perspectives that view health lifestyles as socially structured practices (Abel, et al., 2000; Cockerham, 2005; Williams, 2003), and as Collective Lifestyles (Frohlich, et al., 2001), food choices were conceptualized as social practices.

Borrowing Giddens notion of social practices from Structuration Theory, the Food Choice Practice Framework provides the conceptual tools to explore food choices as: traits of particular groups of people; as patterns of routinized practices; and as socially structured by rules and resources. It understands social structure as social rules; meaning and norms

and resources; both material and authoritative which facilitate desired food choices. Understanding how rules and resources empower or constrain food choice practices is the objective of structuration analysis.

Food choices as social practices empirically supported

Empirically demonstrating the proposed food choice practice concepts was a key step in assessing the utility of the conceptual framework for studying food choices in real life contexts. By demonstrating that food choice activities were purposefully oriented, from the perspective of the key informants, we were able to demonstrate agency involved in food choices. Social structures were evidenced in the social meanings and norms expressed in families' narratives of their food choice practices. Resources were illuminated in the ways in which families accessed materials and authority to empower or constrain desired food choices. Rules and resources were understood to be constituted in the food choice practice routines and reflected in the structured features of family life, being parents, raising children and living in the particular community.

The description of five kinds of recurring practices across all the study families support that food choices practices form routines. In our study, routines were oriented toward creating meals, acquiring food from food services, ensuring children ate, monitoring what children ate for health, and teaching children. Because these food choice practices occurred regularly in all families we considered these to be collective features. Food choice routines were inductively identified, and therefore, cannot be generalized to other types of families like those with adolescent children, or families with young children in different

community settings. Nonetheless, the findings support using a food choice practice perspective for identifying food choices as usual and routinized activities. Furthermore food choice practices can be analytically distinguished according to their purposes which can be grasped from the perspectives of those whose practices we aim to understand.

By examining families' routine meal creation practices, we were able to begin to explain how different configurations of resources enabled some families, and how different kinds of resource limitations structured distinct constraints. By appreciating the circumstances in which families navigated their food choice as structured rich meanings, expectations and accessible resources, explanations for persistent food choice practices become apparent. Food choices that are maintained are those families considered to be meaningful and appropriate in the context of family life, and practicable given the way food resources were accessed. This represents valuable knowledge for those who are interested in understanding and creating the conditions conducive to practices that promote healthy nutrition.

Food choices and contexts are inextricably linked

Intuitively we understand that context is significant for understanding the diversity of human food use patterns. Various political, economic, social, historical and geographic factors provide explanations for the myriad cuisines and diversity of diets observed across the globe (Germov & Williams, 2004; Mennell, et al., 1993a). The role of environment as an important determinant of diets is increasingly being recognized in public health nutrition (Townshend & Lake, 2009). More and more research is investigating the role of food

availability or food access by examining the geographic distribution of food retail outlets with regard to a number of nutrition, dietary and health-related outcomes. However the limits in approaches which examine environment as variables of influence have yet to propose satisfactory mechanisms for how environments promote food choice patterns. Most research on food environments have not investigated the social relational aspects or how people interact with environments. The Food Choice Practice Framework does approach this aspect.

Taking the practice perspective developed in this thesis, food environments are not assumed to be separated or external from the food choices that people practice. Rather the Food Choice Practice Framework proposes a relationship between food choice and family context. In understanding food choices as social practices, environment is understood as being constantly integrated into the choices people make through socially structured rules and resources. By looking at food choice practice routines, we have a dynamic account of how environment understood as social structure reinforces dietary patterns which generate in relation to particular places.

Exploring Lay Knowledge to Understand the Structuration of Family Food Choices

In its methodology, this study was able to investigate the structuring processes of family food choice practices by exploring the experiences and accounts described by key informants. The methodology was built upon research that explores lay knowledge as valid sources of information on the social relationships that structure lived realities (Popay, et al.,

1998; Williams, 2000). The knowledge people have about the places they live, and how this shapes what they do, holds clues for researchers who want to understand the context of food choices. The methodology provides an example of using family feeding accounts or narratives to investigate socially structural relationships. Lay knowledge from key informants became essential for studying the structuration of family food choice practices.

Families constituted in their food choice routines

Families can be defined by their patterns of activities that create family life and connect its members (Bernardes, 1997; Morgan, 1996). Food practices in families are recognized as contributing to what families come to expect as normal family life (Gregory, 2005). By characterizing food choice practices of families, this research identified key practices in which food choices are shaped, but which also contribute to structuring families. For Giddens, routinized practices that endure through time in recognizable forms are the basis for the constitution of the systems of society. This research supports that family food practices are important routines that constitute families and create normal family life. The implications of this perspective of family food choices raise important directions for public intervention that target children and families. It raises the point that targeting dietary change in families involves re-structuring the rules and resources and food choice practices that constitute families.

Food choice practice routines provide important targets for nutrition interventions. This perspective encourages nutrition intervention designers to understand the social structuring processes that give rise to food choice patterns. On a deeper level, it asks public

health practitioners to recognize the defining role food plays in families. It urges practitioners to reflect on how nutrition interventions designed to change family food choice practices are consequently involved in re-structuring families. It stimulates a reflection by practitioners on how the meanings and norms which structure practitioners' understandings of family food choices diverge and align with the realities of family life. Such a reflection could have a significant impact on public health intervention practices by creating understandings of the perspectives, experiences and circumstances of the populations whose health-influencing actions are the target for reform.

Future Directions

This study explored food choice patterns in families as one particular social group. However the Food Choice Practice Framework has the potential to guide studies of food choice practices among other social groups. An example of applying the framework to explain the structuring of youth food practices, using the reported findings from a study by Wills (2005), was provided in the theoretical article (Delormier, et al., 2009). Future work remains on identifying the kinds of food choices practices that are most fruitful to study. In this research the focus was wide in addressing family food choice practices generally. Creating meals emerged as the most strongly represented food choice practice observed across all families, suggesting meals in families are significant food choice activities. More work will be required to deepen our initial understandings of meal pattern variations, and the configurations of rules and resources that constrain and enable family meal patterns. Further work should focus on food choice practices that represent parenting/raising children which emerged as key activities in families with young children.

This thesis suggests that food choices are key activities underlying dietary patterns which impact nutrient status. However, measures of dietary or food intake was not undertaken. It would be insightful to examine the links between food choice practice routines in families with measures of dietary intake. In terms of the patterning of food choice practices over time, this study did not establish patterns longitudinally, rather the notion of routines relied on people's accounts of their usual ways of doing things. However, the patterning of food choice practices over time could illuminate how family structures and their food choices are maintained and transform over time. Such knowledge could help explain how changing circumstances in families transform their food choices. Improving knowledge of how conditions shape health related practices is a cornerstone of promoting a healthy lifestyle.

Contributing to the theoretical foundations of Health Promotion

Health promotion is defined as the process of enabling people to increase control over and improve their health ("Ottawa Charter for Health Promotion," 1986). Health promotion intervention envisions moving beyond a focus of individual behaviour, and also address social determinants and environmental conditions which shape the lives and health of populations. The lofty goals of health promotion have nonetheless been criticized as rhetorical, one of the reasons being the lack of clear theoretical foundations upon which to build health promotion actions (McQueen et al., 2007; Poland, 1992). The Food Choice Practice Framework was developed in order to address the lack of health promoting approaches in Public Health Nutrition. It offers a theoretical guidance for research and practice to consider how structured conditions create the social circumstances in which

food choice practices can be either health promoting, or not. This knowledge can stimulate reflection in public health and health promotion practice and inform actions that create conditions that make the healthier choice, the easier choice.

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APPENDIX

Appendix 1 - Recruiting invitation sent to parents
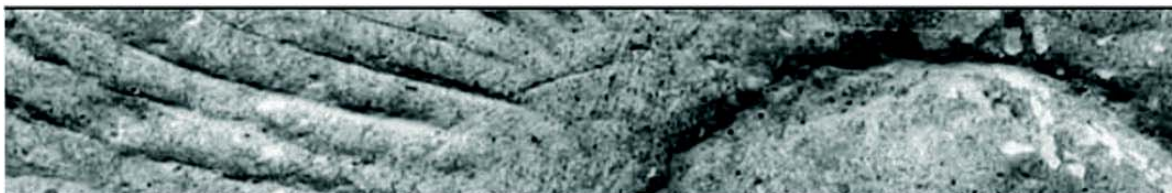
Are you the person who is in charge of feeding your family?

The Study

This research project is part of the Kahnawake Schools Diabetes Prevention Project (KSDPP). KSDPP's goal is to prevent diabetes by promoting healthy eating, physical activity and a positive attitude. It is a community-wide program with special focus on primary school children. Recently the project expanded its focus to include younger children and their families in order to complement efforts to start diabetes prevention earlier. This study is a part of the focus on younger children.

The research will examine what is involved with feeding families. In particular we want to understand what is involved with getting food for the family, what does food and family life involve and how this relates to what preschool aged children eat.

The Criteria

We are looking to interview in-person, people who fit the following criteria:

✓ You have a preschool child (3 to 5 years old, not already in Kindergarten) in your family

✓ AND : You are the person primarily responsible for feeding your family (grocery shopping, cooking, meal planning etc.)

✓ AND : You live in Kahnawake

✓ AND: You are willing to talk with a Kahnawake researcher about family feeding

The Interview

The interview will take from 1 to 1.5 hours. It will be done at your convenience and will be confidential. You will receive an incentive (30$ worth of groceries) for your participation. All information collected will belong to the community of Kahnawake. The interviews will be done by Treena Delormier.

☐ **Yes, I am interested in participating.**

_____   _____
Name   Telephone

☐ **OR...Yes, I am interested in participating. Contact Treena Delormier directly at KSDPP**

This study has been approved by the Community Advisory Board of KSDPP, Onkwatakaritahshera Health and Social Services Research Council (OHSSRC) and the Ethics Review Committee of University of Montreal. The KSDPP ombudsperson for this study is Lois Montour

KSDPP

KAHNAWAKE SCHOOLS DIABETES PREVENTION PROJECT
CENTER FOR RESEARCH AND TRAINING

Appendix 2 - Questionnaire guide

Family interview Questionnaire guide
(final revised February 22, 2005)

Introduction

The purpose of the interview is to try to understand how Kahnawake families feed their family. It will focus on everyday activities that relate to getting food (shopping, eating out, ordering in) and your family (meal patterns, the times and places where family members eat) and about the food and eating habits of your preschool child.

This is not a nutrition study and I will not be evaluating your diet or what you eat. Although I am a nutritionist, I am really interested in the day-to-day activities that you experience as this relates to food and your family.

Do you have any questions or concerns before we begin?

Before we begin I want to make sure you understand the study. Signing the consent form means that you understand and agree to the interview. Was there anything that was not clear from the consent form? Did you want to add anything to the consent form about your participation?

1. Since the interview is going to focus on feeding the family, could you please tell me about your family that lives in this household?

   (ages?)

2. As the person primarily responsible for feeding your family, could you please tell me about what are the tasks involved in this work?

3. Could you describe for me how you go about your day as it relates to feeding your family?

   Do you distinguish between a weekday and weekend day?
   Who else in the household assists in this tasks?

4. Could you describe to me what's involved with getting groceries for your home?

   Where is the principal place(s) where you shop, secondary places, grocery shopping Kahnawake,specialty stores or for special item?
   What types of foods are purchased at each of these places?
   How do you decide what you need to buy, what guides your grocery shopping tasks?
   When do you go shopping how often?
   What kinds of things do you keep in mind with respect to your family members when you buy food?

How flexible is your food budget?

Is Transportation easily accessible?

Do you take your preschooler (and or other children) with you shopping? How does this have an influence on what you choose to buy?

5. I'd like to talk about "eating out"? Could you tell me about your family's eating out habits? (Foods that are purchased and ready to eat)

   Dine at restaurants.
   What about foods that you pick-up to eat at home or elsewhere?
   What food do you typically pick up?
   What are the circumstances that lead up to food being picked up to eat at home?
   Does your family order-in or have food delivered to your home?
   What types of foods and what are the circumstances that lead up to food being delivered?
   Who decides to order in, pick-up, eat out? Who decides where and what to eat?

6. Could you talk about the food preparation and cooking that you do in the home?

   How do you go about organizing theses tasks, (time; schedules, planning, pattern of meal events?
   What types of foods are prepared?
   What is the routine meal pattern?
   Are there any special concerns you take into considerations for the preschool child?
   Concerns about other family members?

7. Could you describe to me the eating habits of your **preschooler** for a typical day?

   Types of food? Meal and snack patterns?
   Day care or other care givers

Health and nutrition messages about feeding the family.

8. When it comes to feeding your family, what, if any, health considerations come into play?
   Shopping for food,
   Preparing/cooking food,
   Planning meals,
   Choosing restaurants, food stores.

9. What sources of information on health messages about nutrition and healthy lifestyle will you seriously consider? Kahnawake based? Mass media (television, newspaper, magazine)? What are some of the principles of healthy eating do you use when going about your tasks of feeding your family? What particular considerations do you have your preschooler? Other children?

Family meals

- According to you what makes a meal a family meal? How has your family influenced your meals and feeding.

  What kinds of foods are there in a family meal?.

- How are family meals for you the same or different from when you were a child?

- **Demographic information**

Family income

  a. 0 - 25,000
  b. 25,000 -50,000
  c. 50,000 – 75,000
  d. 75,000 -100,000
  e. over 100,000

Education attainment

  1. person responsible   b. partner

Appendix 3 - Refined code list

Refined Code List
June 2008
Finalized with Lisa Petersen research assistant

Agency constrained
Agency enabled

<u>ALR- Allocative Resources</u>

ALR- daycare or school
ALR- food
ALR- food service
ALR- food source
ALR- food storage
ALR- money
ALR- transportation
ALR - budget
ALR - food preparation equipment
ALR - garden
ALR - vitamin supplements

<u>AR – Authoritative Resources</u>

AR - using knowledge of health risks
AR - assisting other family members
AR - decision making capacity for food choices
AR - Experience in eating out
AR - Experience in family 's food and eating
AR - Experience in feeding children
AR - Experience in obtaining food for the family
AR - family support for being active
AR - getting assistance from family members
AR - getting assistance from friends
AR - skills - cooking
AR - skills for obtaining food planning, lists
AR - skills in planning meals
AR - using knowledge of traditional food
AR - using nutrition knowledge
AR - using time for food preparation
AR - using time for obtaining food

<u>CR – Conduct Rules</u>

CR - diet and eating
CR - eating out
CR - family food and eating
CR - feeding children
CR - food preparation
CR - obtaining food
CR - policy on food and eating

<u>FCP - Food Choice Practices</u>

FCP - CREATING MEALS
FCP - EATING OUT
FCP - ENSURING
FCP - MONITORING
FCP - TEACHING

<u>MR – Meaning Rules</u>

MR - value - body image
MR - value - eating out
MR - value - family food and eating
MR - value - feeding children
MR - value - food
MR - value - producing your own food
MR - value - meals
MR - beliefs - body
MR - beliefs - concerns related to family food and eating
MR - beliefs - family food and eating
MR - beliefs - feeding children
MR - beliefs - food
MR - beliefs - husbands/men/partners eat differently
MR - beliefs - men to eat junk food
MR - beliefs - obtaining food for the family
MR - beliefs/values - traditional food practices
MR - food meanings

Appendix 4 - Research Ethics Documentation

Ethical Approval Letter from the Community Advisory Board of the Kahnawake Schools Diabetes Prevention Project

KAHNAWAKE SCHOOLS DIABETES PREVENTION PROJECT

Center for Research & Training in Diabetes Prevention

P.O. Box 989, Kahnawake Mohawk Territory

Quebec, Canada J0L 1B0

"Healthy Eating Habits & Daily Physical Activity Can Prevent Diabetes"

Review and Approval Process for Ethically Responsible Research
Certificate of Approval

The Community Advisory Board of the Kahnawá:ke Schools Diabetes Prevention Project has granted approval:

For Research Proposal Project entitled:

Linking context to feeding the family: a study of dietary practices among families with preschool children in the Kanien'keha:ka (Mohawk) territory of Kahnawake, (Quebec), Canada

Proposed by:

Name of Researcher: Treena Delormier

Academic Supervisor: Dr. Louise Potvin and Dr. Katherine Frohlich

Institution: Université de Montréal

Month and Date of CAB Approval: November 16, 2004

Confirmed by the CAB Executive Committee

Signature _____

Name: Rita McComber

Date: 11/22/04

Administration/Research

Phone (450) 635-4374
Fax   (450) 635-7279
www.ksdpp.org

Intervention/Training

Phone (450) 635-4477
Fax   (450) 635-7871
e-mail at info@ksdpp.org

Ethical approval from Comité d'éthique de la recherche de la Faculté de médecine

Université de Montréal

Faculté de médecine
Vice-décanat
Recherche et études supérieures

**APPROBATION DU COMITÉ D'ÉTHIQUE DE LA RECHERCHE DE LA
FACULTÉ DE MÉDECINE (CERFM)**

Le Comité d'éthique a étudié le projet intitulé :

**Lier le contexte à l'alimentation de la famille : une étude de pratiques
alimentaires parmi les familles avec enfants d'âge préscolaire dans le
Kanien'keha :ka (Mohawk) territoire de Kahnawake (Québec)**

présenté par : **Mme Treena Delormier et Dre Louise Potvin**

et considère que la recherche proposée sur des humains est conforme à l'éthique.

Dr Vincent Castellucci, président

Date d'étude :   **14 décembre 2004**

Date d'approbation :   **Modifié et approuvé le 9 février 2005**

Numéro de référence :   **CERFM 61 (04) 4 #148**

N.B. Veuillez utiliser le numéro de référence dans toute correspondance avec le
Comité d'éthique relativement à ce projet.

*Le Comité comprend que le chercheur se conformera à l'article 19 de la Loi
sur les services de santé et services sociaux.*

*Le chercheur doit solliciter le CERFM pour toutes modifications ultérieures
au protocole ou au formulaire de consentement.*

C.P. 6128, succursale Centre-ville
Montréal QC H3C 3J7   Télécopieur : (514) 343-5751   www.med.umontreal.ca/recherche

Letter from the Comité d'éthique de la recherche de la Faculté de Médécine (CERFM) recognizing the quality of the application for ethical approval

Université
de Montréal

Faculté de médecine
Vice-décanat
Recherche et études supérieures

Le 3 mars 2005

Mme Treena Delormier
Candidate au doctorat
Santé publique (Promotion de la santé)
GRIS

Objet : Code d'éthique

Madame,

Le Comité d'éthique de la recherche de la Faculté de médecine tient à vous spécifier qu'il apprécie grandement la qualité du Code d'éthique de l'équipe de recherche de « Kahnawake Schools Diabetes Prevention Project (KSDPP) ».

En effet, ce code d'éthique est d'une qualité remarquable et pourrait servir d'exemple aux autres chercheurs car il favorise des échanges respectueux avec les populations de culture différente.

De plus, la qualité de la rédaction est conforme aux directives de L'Énoncé de politique des 3 Conseils et du CIOMS.

Nous vous félicitons pour cette réalisation et apprécierions que vous nous autorisiez à le référer à d'autres chercheurs faisant face aux mêmes défis.

Représentante éthicienne au CERFM,

Danielle Laudy, Ph.D

C.P. 6128, succursale Centre-ville
Montréal QC H3C 3J7   Télécopieur : (514) 343-5751   www.med.umontreal.ca/recherche

Appendix 5 - Consent Form

**KAHNAWAKE SCHOOLS DIABETES
PREVENTION PROJECT
CENTER FOR RESEARCH AND TRAINING**
P.O. Box 989
Kahnawake Mohawk Territory, via Quebec, J0L 1B0
Tel.: (450) 635-4374   Fax: (450) 635-7279

Research Consent Form

Linking context to feeding the family: a study of dietary practices among families with preschool children in the Kanien'kahaka (Mohawk) territory of Kahnawake, (Québec), Canada

This research project is part of the Kahnawake Schools Diabetes Prevention Project (KSDPP). The KSDPP is a participatory research project. It has been involved in promoting diabetes prevention in the community for the last 10 years. The main aim of the KSDPP is to prevent type 2 diabetes through promoting healthy eating habits, physical activity and a positive attitude. The KSDPP tries to give people in the community basic knowledge, skills and support to practice good health behaviors.

The purpose of this study is to explore what is involved with feeding the family in the community of Kahnawake. The study findings will be shared with the KSDPP intervention team and the community. Results will add to our understanding of family and preschooler's eating habits and inform actions aimed at improving food and nutrition patterns. The research will examine what are shared patterns of acquiring food, family eating patterns and preschool eating patterns that exist in the community. We are interested to see how features of Kahnawake shape how people feed their family.

Learning about family feeding practices in Kahnawake will require interviewing the person in the family who is responsible for the work of family feeding. The interviews will investigate the everyday activities around getting food for the family, how families shape their food and meal patterns and how preschoolers' food and eating habits are formed as well.

The study will be led by Treena Delormier, a doctoral student, under the supervision of Louise Potvin, PhD and Kate Frohlich from the University of Montreal and Ann Macaulay and Tracee Diabo of the KSDPP. Treena is a member of the KSDPP community advisory board (CAB) and part of the KSDPP research team. She has funding from the Canadian Institutes of Health Research to conduct the research.

This study has been approved by the KSDPP Community Advisory Board and the Onkwata'karihtahshera Health and Social Services research council, as well as the Ethics Review Committee of University of Montreal.

Procedures

As a participant you are being invited to participate in a face-to-face interview, or possibly a series of 2 interviews, with the researcher, who will ask questions about what is involved with feeding your family. In particular she will ask about the places where you get food for your family, about how your family coordinates food and eating and finally specific questions about the food and eating habits of your preschool child. For your preschool child she will also ask you to describe her/his usual food and eating patterns. The interviews will last about 1 to 1½ hours. The interview will be conducted at your convenience, in your home or another location that you prefer. If you need a babysitter to watch your children during the interview, the cost will be covered by the research project.

The interviewer will ask your permission to tape record the interview. Tape recording will help the interviewer to access all the ideas from the interview once it is finished. If you are uncomfortable at any time during the interview you may ask to have the tape recording stopped.

Confidentiality

All of the information that will be collected will be kept strictly confidential. No individual will be identified from the collected information. The recorded interviews will be transcribed (typed up) and any information that could identify you or your family will be removed or changed from the transcribed document to ensure your confidentiality. Every precaution will be taken to ensure that none of the information given during the interview will be linked to your name or the name of a member of your family. Recordings of the interview will be stored in a locked filing cabinet at the KSDPP office in the Kahnawake Education Center and destroyed at the end of the study in August 2007. Transcripts of the interviews will be kept securely for 7 years after the end of the study. Only the researcher analyzing the interviews (T Delormier) will have access to the transcripts.

We may use a quotation from what you have said to support an important idea. However, neither your name, title nor any organizations to which you belong will be attached to that quote.

Advantages/Risks

There are no risks known to be associated with your participation. There is no direct compensation of participating in the interviews, however the results of the research is intended to better understand the conditions under which families with preschool children are living and how this influences food and eating habits. This understanding may help develop useful and meaning activities to assist families in feeding their families with a view of promoting health. The results of the study could be useful to other researchers who want to understand how communities shape family feeding. You will be given a token of appreciation for your participation which will be a basket of groceries worth approximately $30.00.

Contacts

If you have any comments or concerns, or need any additional information, you should contact Treena Delormier at   or Tracee Diabo, the KSDPP research coordinator   or (Lois Montour) who is the KSDPP ombudsperson for this research project

2

Freedom of Consent

Please read the above description of the study. You may refuse to participate or withdraw from the study at any time. You have the right to answer only those questions with which you are comfortable. This will in no way affect you or your family's present and future care in any education, health or social service agency inside or outside Kahnawake.

Statement of Consent

I have read the above description of the study. I have had the opportunity to ask questions about it, and I consider that I have been fully informed. I understand that I may refuse to participate or that I may withdraw at any time without affecting my present or future care. I also understand that all information about me will be kept strictly confidential.

I accept to participate in this study.

Name of participant	Signature of participant	Date

I have explained to the participant the terms of the consent form for this research project. I have clearly explained that she/he can add other conditions relating to her/his participation in this study at any time. I will provide a signed copy of this consent form to the participant.

Name of researcher	Signature of researcher	Date

Principal Investigator
Treena Delormier
KSDPP/Université de Montréal

A copy of this consent form will be securely kept at the KSDPP research office.