

# Exploring Familial Themes in Malaysian Students' Eating Behaviors

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*Food-related attitudes and habits are integral to overall well-being, especially among international college students who often practice poor eating habits and experience high levels of stress from factors like school and sociocultural adjustment. Utilizing in-depth interviews, this study explored how family experiences impact food-related habits, attitudes, and beliefs of Malaysian college students in the U.S. Findings indicate that early experiences with family substantially impact current habits that persist even after coming to the U.S. and that dietary choices and habits are heavily embedded in cultural background and family history. Family influenced current habits through multiple means, including modeling, direct teaching, and indirectly through various family activities. Even though there were some persistent and lasting eating habits and behaviors, students also experienced some dietary changes and conflicting dietary practices after coming to the U.S. These findings are important for universities to consider so that appropriate steps can be taken to ensure the health and well-being of Malaysian and other international students in the U.S.*

**Keywords:** Malaysians, international students, food, family, culture, health, nutrition

For many students, the college years can be a time of high-stress and multiple adjustments. It is a time when many young individuals must learn to live on their own, as well as cope with the rigors of their academics and other activities. These challenges are often reflected in the food choices and eating behaviors of college students who report practicing poor eating habits and experiencing high amounts of stress (Jackson, Berry, & Kennedy, 2009). This combination of high stress and poor and inadequate diet can have many negative consequences for overall well-being and development (Jackson et al., 2009). Thus, examining factors that promote health and well-being, especially in the realm of dietary choices and behaviors in this population, is important.

## International Students

Currently, there are over 723,000 foreign students in the U.S. (Open Doors Institute of International Education, 2011). The stresses of college life and its impact on health and diet can

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be particularly heightened for those international students who have the additional challenge of adjusting to a new country and way of life. International students have numerous added stressors in their adjustment, for instance, language barriers, lack of social ties, and poor access to mental health facilities (Mori, 2000; Poyrazli, Kavanaugh, Baker, & Al-Timini, 2004). These challenges also include adapting to new food and learning nutritional information about such food (Perez-Cueto, Verbeke, Lachat, & Winter, 2009), and possibly the responsibility to purchase and prepare their own meals for the first time if they live off campus. Pan, Dixon, Himburg, and Huffman (1999) found that after staying in the U.S., Asian international students consumed less breakfast than when they were in their home countries, consumed large amounts of salty and sweet snacks, ate more fast food, consumed more fats and dairy products, and consumed less vegetables and meat. Brown, Edwards, and Hartwell (2010) conducted a study in England to explore the meanings international students attach to food and found that students thought the local food was fattening and unhealthy, and they sought comfort in home country food. Nonetheless, the health needs and dietary experiences of international students have been relatively unexamined and merit further attention. This study explores the experiences of Malaysian college students in the U.S., their dietary behaviors and choices, as well as their perceptions regarding the role of their families in their current food-related behaviors.

### **The Role of Family in the Formation of Eating Behaviors**

Not surprisingly, research suggests that family and early experiences can have substantial influence on individuals' food-related attitudes and behaviors. One way by which this influence happens is through parental modeling (Dube & Stanton, 2010; Marshall, Golley, & Hendrie, 2011). Through mechanisms like observational learning and facilitating/inhibiting occurrences, parental modeling has a significant influence on children's dietary behaviors and weight status (Marshall et al., 2011). Parental intake of fruit, vegetables, and dairy products was positively associated with children and adolescents' consumption of such foods (Larson & Story, 2010). Campbell, Crawford, and Ball (2006) also found a positive association between parental modeling of eating and vegetable intake of preschoolers and that parents served as direct role models for children's vegetable consumption.

Families also serve as a venue through which behaviors are formed, particularly as youth participate in the food-related activity within the family. Gross, Pollock, and Braun (2010) found that fourth- and fifth-graders who reported a greater role and engagement in grocery shopping with their families consumed more fruits and vegetables compared with their peers who did not have such engagement. Students who had parental support and encouragement in fruit and vegetable consumption also consumed more fruits and vegetables compared to their peers who did not have such parental support. Accessibility and participation in fruit- and vegetable-related activities also increased fourth- and fifth-graders' consumption of such foods. Studies have also been conducted on the influence of family mealtimes, and the majority of the

research showed positive influences of family mealtimes on children's and adolescents' healthy eating behaviors and healthier food consumption patterns, like consuming more fruits and vegetables and having breakfast regularly (Andaya, Arredondo, Alcaraz, Lindsay, & Elder, 2011; Berge et al., 2012; Burgess-Champoux, Larson, Neumark-Sztainer, Hannan, & Story, 2009; Fruh, Fulkerson, Kendrick, & Clanton, 2011).

Families can also serve as an important source of information about food through direct teaching. Health professionals have noted that it was important for parents to talk to their children about the nutritional value of food in order to promote healthy food-related behaviors (Marshall et al., 2011). Through the possession of nutritional knowledge from parents, individuals can then adopt and establish healthy dietary behaviors (Worsley, 2002). Parents can directly talk to their children about nutrition and other vital information about food. In a study on college students' dietary habits and beliefs, Davy, Benes, and Driskell (2006) found that female college students obtained most of their nutritional knowledge from family members. Family members were the second most important source of nutritional knowledge for male college students, after nutrition-related classes (Davy et al., 2006). Another study on student reception and believability of health-related information also showed that college students found parents as one of the believable sources of health-related information (Kwan, Arbour-Nicitopoulos, Lowe, Taman, & Faulkner, 2010).

Finally, parenting behaviors, parenting style, and parent-child relationship quality appear to have some impact on youth's dietary choices and behaviors. Positive family environments and healthy parent-child relationships appear to be related to more positive food behaviors. Franko, Thompson, Bauserman, Affenito, and Striegel-Moore (2008) found that girls who reported greater family cohesion consumed breakfast more frequently; consumed less soda; and had higher milk, fruit, and vegetable consumption. It is unclear why, but having close bonds to family might increase the likelihood that children and adolescents accept parental advice on healthy eating. In contrast, highly controlling parenting styles appear to undermine the development of self-regulation and are linked to lowered ability in youth to control their eating and to make healthy dietary choices (Branen & Fletcher, 1999; Francis & Birch, 2005). Lorentzen, Dyeremose, and Larsen (2011) also found that adolescents who successfully lost weight and adopted healthier dietary behaviors had parents who were supportive and accepting. This was compared to adolescents who had parents who were controlling or indulgent, and who failed to make healthy dietary changes and achieve their weight loss goals (Lorentzen et al., 2011).

Thus, there is growing evidence to suggest links between family experiences and food-related behaviors. However, most studies are conducted with children and adolescents. There are limited studies conducted with college students and even more limited studies on international college students who are likely to be further away from home and facing sociocultural

adjustments. Most data in the existing studies are also collected from the parents' perspective and not from the children's or students' perspective. Most studies in the field of family and eating behaviors were also focused on families of individuals with disordered eating behaviors. The role of family in normative and ethnic populations is less understood. This study is intended to help fill that gap.

### **Malaysian Culture and the Role of Family**

Generally, research suggests that Southeast Asian cultures emphasize collectivist values, and that families and parents espouse interdependence (Schwartz, 1994). Malaysia, a country with three main races (Malays, Chinese, and Indians), represents a collectivist culture with a strong emphasis on interdependent relationships with others and on harmony, duty, obedience, and family integrity (Keshavarz & Baharudin, 2009). As a collectivist society, individuals are encouraged to maintain group cohesion and to conform to family rules and expectations (Kagitcibasi, 1997). Malaysian children are socialized from young ages to obey and respect their parents (Keshavarz & Baharudin, 2009). Therefore, with such heavy emphasis on family in Malaysia's collectivist society, it is likely that family plays an important role in shaping Malaysian students' eating behaviors. With this in mind, this study aims to understand the importance of family in Malaysian students' eating attitudes and behaviors.

### **Acculturation and Dietary Attitudes and Behaviors**

With the move from one country to another, international students, like immigrants, often experience changes in dietary habits and behaviors due to acculturation (Satia, 2010). Dietary acculturation is a process in which immigrants, or those of international status coming into one country from a different country, adopt the eating habits and patterns of the host country, which are generally more detrimental than beneficial to the health and well-being of these individuals (Satia, 2010). Mellin-Olsen and Wandel (2005) conducted focus group interviews with 25 Pakistani immigrant women in Oslo, Norway, and found that these Pakistani immigrant families used to consume more vegetables in Pakistan, but when they migrated to Norway, they consumed more meat. They also cooked more meat curries and less vegetable and lentil curries in Norway compared to when they were in Pakistan because in Norway, people preferred meat over vegetables and legumes whereas the reverse was true in Pakistan (Mellin-Olsen & Wandel, 2005). After coming to the U.S., Benbenek and Garwick (2012) found that Somali girls liked consuming junk or snack foods (e.g., chips) and American fast food (e.g., pizza, tacos, and hamburgers) because these foods tasted good, filled them up, and were easy to obtain. In another study, Creighton, Goldman, Pebley, and Chung (2012) examined the relationship between acculturation and obesity in the Latino population and found that there was a significantly lower intake of fruits and vegetables and a higher intake of sweetened beverages and fast food in second- and third-generation Mexicans as they became more acculturated with each consecutive

generation. Although acculturation is not within the scope of this study, it is important to note that acculturation definitely plays a role in some of the formation and changes of Malaysian students' dietary behaviors in the U.S.

### **Research Questions**

The purpose of this study is to explore and understand the role of family on the eating behaviors and food choices of Malaysian international students in the U.S. through the students' perspective. There are two research questions in this study. The first research question is "Do Malaysian students think that family plays a role in their eating behaviors?" The second research question is "How do families play a role in Malaysian students' eating behaviors when they were in Malaysia and when they are in the U.S.?"

### **Method**

A qualitative approach is taken in this study because the purpose of qualitative research is to explore, understand, and learn about a specific situation or phenomenon (Stake, 2010). The use of qualitative methodology is suitable to understand the role of family in eating and other food-related behaviors in a specific population—Malaysian students living away from home. Qualitative research acknowledges the existence of multiple realities based on personal experiences and utilizes data collection methods such as interviews (Stake, 2010). The use of interviews to collect data in this study allows for experiential understanding of the participants' thoughts regarding the role of family in their eating behaviors.

Social constructivism is the worldview through which this study is done. According to Creswell (2007), social constructivism is a worldview in which individuals seek meaning and understanding in their living environment, taking into account the multiple views and perspectives of individuals. The aim of this worldview is to seek participants' views and rely on their experiences as much as possible to form complex views and multiple realities (Creswell, 2007). This study aims to understand the role of family in Malaysian students' eating behaviors, as well as seek out multiple perspectives of Malaysian students on how family has a role in their food-related behaviors before and after students left their country, and thus, social constructivism is the most appropriate worldview for this study.

### **Participants**

A total of five Malaysian students from a large Midwestern university participated in this study. All students self-identified as being of Chinese descent, meaning their ancestors originated from China and migrated to Malaysia centuries ago. Participants were three females and two males who were 22 or 23 years of age. Two of the participants were undergraduates, and three

participants were graduate students. Two participants have not been back to Malaysia for the past year, whereas the other 3 participants were back in Malaysia during the recent summer vacation. All participants have been in the U.S. for at least one year.

### **Interview Protocol**

A semi-structured interview protocol was developed for this study. The author's biases and expectations were noted, and caution was taken so that interview questions were not shaped by any expectations. Participants were asked an ice-breaker question, "What comes to mind when you think about family and food?" Subsequent questions were probed from the participants' answers. Questions were asked concerning participants' current eating patterns, eating patterns when they were in Malaysia, thoughts on the role of family in their food-related behaviors while they were in Malaysia and in the U.S., and thoughts on how family might have shaped their current food-related behaviors.

### **Procedure**

A convenience sample was used in this study, and the only criterion was that participants must be international Malaysian students. All volunteered to be a part of this study when informed about it during a Malaysian Students' Association event. Each participant completed a 15- to 20-minute interview in English at a secure and quiet location on the university's campus. These interviews were audiotaped and transcribed. Interviews were identified by participants' initials.

### **Analysis**

The transcribed interviews were analyzed using MAXqda, a qualitative data analysis software. Data were searched for data blocks that were recurring and significant regarding participants' thoughts on the role of family on their food-related behaviors. From these data blocks, codes were formed to encompass the information in each data block. Whenever possible, *in vivo* codes were used to give the study a stronger sense of the participants' perspectives. After all the codes were obtained, they were reviewed to see if any overlapping occurred. Redundant codes were removed or collapsed with other codes, and by the end of this process, a new set of codes was formed. The new codes were then grouped together to formulate six themes. Coding and analysis of the data followed an inductive approach—working from the details of participants' experiences to form bigger, broader themes.

### **Validity**

After compiling the themes and their respective codes, the themes and codes were taken back to the participants for member checking to ensure validity. In addition, the author recognized the

potential influences of her own experiences as an international Malaysian student living in the U.S. on the interpretation of these participants' experiences, otherwise known as reflexivity. As a Malaysian student, the author related to the participants' experiences, but at the same time, acknowledged that it was important to learn from the participants. The author was careful to ensure that her experiences were not imposed on the participants during the interviews and an open mind was kept throughout data coding.

## Findings

Codes developed from the interviews were categorized into seven themes: "family plays an important role," "family mealtimes," "parental preferences and decision-making," "parental advice," "conflicting and conditional practices," "lasting habits," and "culture and family history." *In vivo* codes, which were taken exactly as the participants said them, were placed in quotation marks.

### "Family Plays an Important Role"

All participants reported that family plays an important role in shaping eating behaviors. One participant described how he thought family was important because most people grew up eating with family, and those early eating experiences would shape future eating behaviors:

Yeah, family plays an important role in a person's food choices...because what you have now is pretty much what you've been brought up with and exposed to. I mean, if you're brought up eating vegetables rather than an all-meat diet, you're just going to stick with that...When you were a kid, your parents got to feed you right. That way when you grow up, you will do the same thing on your own.

Another participant said that "food plays a very important role in keeping a family together, spending quality time with each other." One participant talked about how food was an "acquired taste" and said that "whatever you grew up eating, you will like." She went on to explain how some foods, which were deemed as weird by others, were normal for some who grew up eating such foods with their families:

I have never heard of peanut butter and celery in my life because they were never eaten together at home. And then I come here and people say, "Yeah, I love that because I grew up eating it." I know people who eat tomatoes with sugar, not salt. So yeah, your family has a lot of influence over what you eat because if you're introduced to it when you're young, like for me, people think Bovril is disgusting or Marmite is disgusting, but for me, I grew up eating that as a kid. I distinctly remember my grandma making it for me, so I grew up to like it even though some people think it's gross.

### **“Family Mealtimes”**

All participants discussed the role of family mealtimes as important in shaping their current food-related behaviors, particularly emphasizing two areas of specific influence. First, respondents associated family mealtimes with healthy and well-balanced home-cooked food. Most participants said that their parents or grandparents prepared meals at home and that these meals were generally healthy. For instance, one person indicated that family meals provided a “better balanced diet with fish and meat and vegetables” and said that meals at home were more “balanced and healthy in general.” Another participant mentioned that her parents are “very, very health conscious people,” and so her meals at home were always healthy. Another said that her mother was a “big advocate of healthy eating” and always prepared very healthy meals at home.

Second, all but one of the participants described meals at home as a venue for family conversation and bonding. They described this as a time when they could talk about different issues and spend quality time together. One participant described a typical mealtime:

We have mealtime conversations about how our days were, how the food during the meal tasted, and sometimes, we talk about the news. I think it is kind of like a bonding session for us as a family.

Another participant talked about how her father used mealtimes to give advice on nutrition and healthy eating habits, as well as provided time for family members to ask each other about their day. She indicated:

I guess we would just talk about what we did today and what are our plans for studies. They [parents] will talk about my studies, what my sister is up to...and then my mum and dad will talk about some of their friends...or what's going on in the news...I think for my family, yeah, mealtimes are important for bonding. Because...we seem to do our own thing throughout the day, but when it's mealtimes, we have to sit down...I feel like for me, I like to sit down and find out what has been going on in their day.

While mealtimes appeared to be a mundane part of daily life, one participant indicated that in hindsight, this typical activity that included “the usual small talk” held much significance as a time for the family to bond and is something that he now appreciates.

### **“Parental Preferences and Decision-Making”**

All participants mentioned how their parents' own food preferences and choices greatly influenced the development of their own preferences and current dietary habits. They generally thought that this influence occurred through two venues. First, their mothers generally cooked their family meals, and thus, their mothers' choices for food dictated what they would eat and

consequently shaped their preferences. Often, this meant that they ate healthy foods. For instance, one participant described meals at home as healthy, “especially when mum is involved...There’s always going to be fish and vegetables...and fruits.” He said that his mother “pretty much dictated what we eat. She doesn’t really ask us what we want to eat on that day...most of the time, we just eat whatever she cooks.” Another indicated that even when her mother was busy because of her career, she would “still always have...a vegetable dish, a meat dish, and some other dish like tofu.”

Similarly, their parents’ choices of what food to buy (e.g., fruits versus junk food) and where to eat (e.g., home versus fast food) directly dictated the types of food to which they had access, and thus, strongly shaped their early experiences with food. For example, one participant talked about how her parents’ preference for fruits meant that they often had fruits at home. Another indicated that his mother liked snacks, so he had access to snacks at home and eventually learned the same habit.

### **“Parental Advice”**

All participants mentioned that their parents were concerned about their eating habits, especially since they came to the U.S. and gave them advice on nutrition and healthy eating both when they were in Malaysia and in the U.S. All participants’ parents would often ask about their eating habits whenever they communicated via the telephone or the Internet. Parents would also give them healthy recipes so they could cook healthy meals on their own. One participant described that most of her nutritional knowledge continues to come from her mother who is a “very, very, very heavy advocate of healthy eating.” She said that her mother educated her on healthy foods early on, which shaped her current habits like “choosing white bread over whole meal bread” and “brown rice is better than white rice.” Another participant said that being health conscious, her parents would constantly nag at her if she did not eat breakfast or if she skipped meals. Her parents also gave her nutritional advice and said that it is important for her to have a “good, wholesome breakfast.” She also said that she never developed the habit of having supper late at night because her parents advised her that “it is not good for digestion.” Another participant also gets nutritional advice and knowledge from her mother who is a doctor. One participant learned recipes and nutritional values of food from watching his mother cook while he was in Malaysia.

### **“Conflicting and Conditional Practices”**

Although certain dietary behaviors were practiced by participants when they were living at home, and participants’ parents constantly gave them advice on healthy eating after they came to the U.S., participants do not always adhere to these practices and to their parents’ advice. Some listened to their parents while they were living in Malaysia, but not when they came to the U.S. because their parents were no longer available to directly monitor them. One participant said

that although his parents kept asking him to cook healthy soups, he hardly does so because he is too lazy to cook and is able to get away with it as his parents were not around. Another participant said that she skips breakfast when living in the U.S. because her parents were not around to nag her about it:

I don't really eat breakfast here [in the U.S.] because I can get away with it...Back there my parents will not let me skip meals. So they will cook for me. If I do not eat, they will nag until I eat it. Here, it's like no one really take care of me. No one really nag me or do anything so I can get away with it. I can skip my breakfast, I can skip my lunch, and I will just eat dinner and eat supper and get over with.

However, she also mentioned that when she gets sick, she will adhere to her parents' advice on healthy eating and consume three meals a day with a good amount of vegetables. For this participant, adherence to her parents' advice and to the healthy dietary practices she had when in Malaysia was conditional according to her health status. Another participant also said that since he came to the U.S., he had to get his own groceries, which allowed him to purchase whatever food he wants:

Since I came here, I'm all by myself. I go to the grocery store and just get whatever I want, and there is no one looking after me. Since I have the freedom to get whatever and eat whatever I want, that kind of changed some of the food that I eat. I eat more meat compared to vegetables, and I buy more junk food, so my junk food consumption slightly increased.

Two participants mentioned that they would make sure their parents' advice was valid before accepting it. Although in general, they listened to and followed their parents' healthy eating advice, they did their own research on food and nutrition as well to make sure that the advice was valid. One participant talked about how she would do her own research about food by reading books and looking for information on the internet, saying that she would "go online or read books" to educate herself in addition to listening to her mother's advice on healthy eating. Another participant also talked about how she adhered to her mother's advice on healthy eating only if it was valid. She gave an example of a time when she decided to be a vegetarian despite her mother's advice against doing so due to the fear that she would not get enough nutrients by not consuming meat. For this participant, she knew being a vegetarian was healthy and so she became one even though her mother thought it was not healthy for her.

### **"Lasting Habits"**

All participants also talked about how certain food habits, preferences, or choices stayed with them from young until the present. These lasting food behaviors consisted of having certain mealtime habits and certain food-related attitudes that they practiced. Some participants mentioned that some factors of their mealtimes remained the same after coming to the U.S.

During the winter months in the U.S., two participants said that their dinner times would get “thrown off schedule” because it got darker earlier, and they grew up eating dinner when the sky got dark. Participants also mentioned the number of meals that they consumed were the same in Malaysia and in the U.S. Participants who do not usually consume breakfast in Malaysia still do not do so in the U.S. One participant who grew up never skipping breakfast and always had his three meals a day continued to do so in the U.S. Another participant mentioned that he has to have fruits every day, “especially oranges” and he “feels uncomfortable not having fruits.” Yet another participant mentioned that she has to eat vegetables and meat with every meal and fruits every day because she “grew up thinking that fruits and vegetables are good,” and it has become “a part of what I eat every day.”

All participants mentioned certain eating behaviors that their families instilled in them which persist until today. One participant mentioned that when he was young, he used to be a messy eater and did not like eating fish and vegetables. His parents nagged him about his behaviors, and he started to eat fish and vegetables and became a less messy eater. For most participants, they were taught by their parents not to waste food, and they would “feel very guilty” if they did so. These participants’ families often talked about finishing food on their plate, and as one participant said, food should not be wasted “because it’s food. If it’s on your plate, then you should eat it.” Another participant also said growing up, his mother did not allow him to eat a lot of sweets and candies, so he does not consume a lot of sweet foods now. Yet another participant mentioned that growing up with her mother as a healthy eating advocate, she now continues to practice healthy eating habits like not consuming “fried food,” and having “white meat instead of red meat, lean meat instead of fatty.”

### **“Culture and Family History”**

The culture within the participants’ families and the participants’ family histories play an important role in their eating behaviors. Coming from a frugal Chinese background, one participant had parents who believed in eating three moderate meals a day without overeating or overindulging. She said that her father has a Chinese saying about eating just enough to feel full and happy and this influenced her to consume meals in smaller portions. She also mentioned that since she grew up in an Asian family and country, she prefers Asian food compared to any other type of food. Another participant also mentioned that growing up in a tropical country with Chinese beliefs, his mother would always encourage him to drink a lot of water and not to eat too much fried foods as they were “heaty for the body,” which could lead to illness. For another participant, her Chinese family encourages eating in abundance. For this participant, the paternal side of her family believed that “having a lot of rice in the kitchen” or having an abundance to eat is equivalent to being prosperous. As a result of this Chinese belief, she has family members who had a string of health problems, which resulted in her adherence to the healthy eating habits that her maternal family practices:

My grandparents died because they chose the wrong food. Because they chose the wrong food, they had diabetes, they had high cholesterol. He [grandfather] used to have 3 rounds of breakfast, lunch, tea time, and then dinner. He probably has 2 dinners. So he enjoys eating a lot, but that was what killed him. Same goes to my grandmother...High cholesterol...killed her as well...My mum's side of the family is very healthy. None of her brothers or sisters has any sickness of that kind...they don't eat unhealthy food at all. And they eat in very moderate portions. My dad's side of the family, they eat in huge portions because in Chinese belief, if you have a lot to eat, you are prosperous...And if you don't have enough to eat, people would say, "Why don't you feed your kids enough?"

However, she mentioned that recently her father suffered a stroke due to his fondness for foods like fatty pork, and this encouraged her father to start changing his eating habits. She also mentioned how her grandmother used to cook for her family before she got sick and how those foods were unhealthy. However, due to the Chinese customary belief in her family, her mother could not directly take over the job of cooking for the family. Instead, her mother assisted her grandmother in her cooking and gave subtle hints for healthier cooking:

I think my mum could not just take over the title of the chef at home because in that kind of Asian culture, being a woman and being able to take charge of the kitchen is very important role in the family. So it's like an honorary title thing that you can't just take away that chef title from your mother-in-law. So my mum just let it be. But a lot of times she would tell my grandma, "Oh maybe you can put less salt."

In this way, family culture influenced the food that this participant consumed during the earlier years of life when her grandmother was still cooking for the family. However, after her grandmother was too sick to cook, her mother took over the cooking, and she started to consume healthier foods and has continued doing so.

## Discussion

This goal of this study was to explore the experiences of Malaysian college students in the U.S., particularly their dietary behaviors and preferences and their perceptions regarding the role of their families in their current food-related behaviors and attitudes. Findings highlight the prime role of family in these domains, as well as the importance that individuals ascribe to family for their current behaviors and well-being. Consistent with earlier research (Branen & Fletcher, 1999; Deshpande, Basil, & Basil, 2009), participants generally agreed that their early experiences with their families were integral in the formation of lasting eating habits and preferences, and that family's influence continued into the present time. Participants viewed this influence as having occurred via multiple means, for instance, by modeling certain behaviors (e.g., snacking, not eating fast food), by directly controlling their access to foods (e.g., food that parents brought home), and through direct teaching and advice.

Findings also suggest that cultural background and family history played a role in the development of food choices and behaviors. Indeed, the development of food preference and dietary habits occurs within multiple contexts, with research having specifically focused on the role of family. However, individuals and families live within broader social contexts, which include cultural background and beliefs, all of which can greatly impact one's view of food (Dube & Stanton, 2010; Miller & Thoresen, 2003). Participants indicated how these beliefs shaped their parents' and families' practices around food and touched on the implications of these beliefs on health—an area of research that scholars have suggested is important to examine (Miller & Thoresen, 2003).

In the context of Malaysian culture, the role of family and familial interdependence is heavily emphasized (Keshavarz & Baharudin, 2009). This theme is emergent in the current study, with participants continuing to be open to parental advice and attributing significant influence of parents on current behavior. Nonetheless, the interviews also highlight diversity among participants' perceptions and experiences. Families who embraced different aspects of the Chinese culture, for example, engaged in different eating patterns at home, thus, influencing participants' later eating behaviors. Family illness, as well as family history of healthy eating practices, also influenced participants' eating behaviors. The prevalence of heart disease in one participant's family made her realize that she wanted to practice healthy eating habits. Families who had been health conscious for generations also increased students' nutritional knowledge and shaped their healthy eating behaviors.

The interviews also suggest that the impact of family is strong, but that the individuals were not simply passive recipients of information or influence. Interviewees noted that despite the strongly interdependent and family-oriented nature of their relationships, their own role in either accepting or rejecting parental influence was also important. In part because of distance, participants often listened to advice from parents; however, depending on their own beliefs or circumstance, sometimes followed or did not follow advice and direct teaching. This led to participants sometimes engaging in dietary practices which conflicted with their parents' advice and influence or were conditional upon the situation or their own knowledge and beliefs. It is also important to note that some of these changes in dietary practices might be due to acculturation as noted by the literature (Benbenek & Garwick, 2011; Creighton et al., 2012; Mellin-Olsen & Wandel, 2005; Satia, 2010) and should be taken into consideration in future studies.

### **Implications and Limitations**

In summary, analysis of the qualitative interviews suggests the following. First, participants viewed family as having played a crucial role in the development of their current dietary preferences and behaviors. Second, this influence happened in multiple ways—through modeling,

participating in family meals, and others. Third, family meals and food-related experience represented multiple meanings for participants. Fourth, cultural background heavily impacted current dietary behaviors. Fifth, although family and culture heavily impacted the dietary behaviors of the participants, they also experienced dietary changes after coming to the U.S. due to their own beliefs and the circumstances of being away from home. These findings shed light on our current understanding of the role of family in dietary development of young adults, particularly for international students who bring with them their own set of cultural beliefs and early experiences.

As the number of international students grows in American colleges and universities, it is important to understand various aspects of their health and well-being, particularly given their elevated risk for stress and challenges (Mori, 2000). Understanding the role of family and cultural background on their general health and their eating behaviors can contribute greatly to better responding to their needs to ensure well-being. For example, understanding that Malaysian students continue to look to parents for guidance, even while in their college years and living away from family, could suggest that programs directed towards this population should involve family. It is also important to note that although family plays a considerable role in Malaysian students' eating behaviors, some students did not always follow their parents' advice on making healthy food decisions after coming to the U.S. Future studies should be conducted to investigate the reasons for international students' changes and conditional shifts in dietary practices from parental advice and influence. One area that could be looked into is dietary acculturation, as noted by Satia (2010), in order to understand how acculturation might influence the dietary behaviors of international college students that were developed earlier in life through family and cultural influence. Future studies should also look at international student health by incorporating multiple influences like family, health professionals, and universities to produce an interdisciplinary study.

Taking into consideration the generally stressful lifestyle of college students and the importance of family and familial contexts for Malaysian and possibly other international students in their dietary and lifestyle attitudes and behaviors, universities should step in to promote healthy lifestyle behaviors, especially for students who do not have families in near proximity. According to the Healthy Campus 2010 report by the American College Health Association (2002), dietary practices are linked to the overall health and well-being of college students. Therefore, it would be beneficial for universities to provide family-type resources or serve as family replacements to the best of their abilities in order to continue the promotion of healthier dietary practices that these students' received from their families. Kwan et al. (2010) found that a number of students in a Canadian university reported that they did not receive any health information from the university regarding physical activity, fitness, and dietary/nutritional behaviors. The students also found health information from health center staff, health educators, and faculty/coursework to be the most believable. This shows that university staff should take

additional measures to promote healthy eating and fitness behaviors to the student population. Brown et al. (2010) found that eating together was a way for international students to construct and maintain social relationships, as well as to communicate national distinctiveness. In light of this, university food events can be organized to bring students together to promote healthy eating and togetherness. Campus student organizations, especially cultural organizations, can bring people of similar and different backgrounds together to meet and participate in frequent get-togethers where they can eat and share food with one another in a social, and somewhat familial, setting. These students can also help one another keep track of dietary practices in place of their family members who are not around to do so. Departments within universities that take charge of matters related to international students can also arrange for students to have host families, as they can be a great source of resources and support and could be particularly beneficial to international students who do not have family with them in the country.

Limitations of this study should be considered in interpreting the results. In-depth qualitative interviews were used to gain a deeper understanding of Malaysian students' experiences and views regarding the role of family in their current dietary behaviors, attitudes, and habits. The use of interviews allowed for experiential understanding and the exploration of a relatively unstudied population and issue. Nonetheless, the study is purely self-report of previously experienced phenomena. Accuracy of memory, bias in reporting, or even control of what to self-disclose are issues that may have entered into the process. Furthermore, the small sample size and self-selection limit the generalizability of the findings. Despite these limitations, the study corroborates earlier research on the role of family in the development of dietary behaviors and habits and provides preliminary information on the experiences, beliefs, and attitudes of Malaysian college students in the U.S.

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