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Research Article

Family Food Environment and Child Eating Behavior in a Private School of Abu Dhabi

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Abstract

Aim: Dietary habits developed during childhood and continued through adulthood. Children's eating behaviours should be monitorining to avoid possible nutritional deficiencies which have been found to be strongly related to the development of future disease such as obesity, diabetes type 2 and others. The main aim of this study is to explore the relationship between family food environment and the eating behavior during dinnertime among children aged 4 to 6 years old in Abu Dhabi. A cross-sectional study was carried out that examined the relationship between family food environment and child's eating behaviour around dinnertime.

Methods: 61 families participated in the study with their children aged 4-6 years old from a private school. They completed a questionnaire that included questions about demographics, eating behaviour and food environment.

Results: 82% of the mothers were reported to be responsible for feeding the children. Most of the families had dinner together three or more times a week. Half of the children got a high score in the child's eating behaviour scale, indicating that they had positive eating behaviour. The results also showed that children of highly educated mothers were more likely to have positive eating behaviour, compared to children of mothers with lower education ($p < .05$). There was a significant positive correlation between modelling of eating and child eating behaviour (Pearson's r = .56, p < .01), and a significant negative correlation between pressure to eat and child eating behaviour (Pearson's r = -.35, p < .01).

Conclusion: This study is in line with other studies showing that aspects in the family food environment have an influence on eating behaviour of children. Educating parents on food environment and its impact on child behaviour is crucial in order to make them able to develop feeding strategies most likely to benefit children's' health.

Keywords: Family, Food environment, Children, Eating behavior

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1. Introduction

Monitoring children's eating behavior and factors influencing food consumption are critical. Some dietary habits developed during childhood continue with people through adulthood [2]. Several unhealthy dietary behaviors leading to nutritional deficiency

and dietary excess are strongly related to the development of serious health conditions [22]. Excess dietary intake can cause obesity, which increases the risk of "coronary heart disease, diabetes, gallbladder disease, some types of cancer, and osteoarthritis of the weight-bearing joints" [22]. According to Magarey et al. [2], people who suffer from obesity during their childhood are more likely to be obese when they become adults [14]. In the United Arab Emirates, it is estimated that the proportion of children who are overweight is 12.1%, while 21.5% of children are at risk of being overweight [22]. This problem is found to be related to the increase in unhealthy dietary behaviors [22].

Children's dietary behaviors and attitudes are shaped by a complex combination of factors [24]. In the first years of childhood, infants are fed when they are hungry. However, when children reach the age of three or four years old, eating behavior becomes a response to "environmental cues about food intake" and is not driven only by deprivation [14]. Recent reviews have shown that individual, as well as environmental influences are potential factors that affect dietary behavior among children and adolescents [24]. Individual factors include "physiological factors, psychological factors, food preferences, perception of healthy eating, knowledge and attitude" [24]. Economic, social, physical and interpersonal influences are features of environmental/collective factors that contribute in determining dietary habits [24]. Family is one of the environmental factors that plays a significant role in structuring child's diet [19]. According to Woodruff and Hanning [1], the family environment consists of four main interrelated influences, which are demographics, parenting style, behavior modeling and the shared environment. The shared environment includes food availability, family rules and media exposure [24].

Research has shown that family is a critical context for determining dietary habits. It has been estimated that children consume "two-thirds of the foods" at home [16]. Children eating practices, such as "attitudes toward food and children's assessment of satiety" are strongly influenced by the family [14]. These practices may later affect child's weight [14]. Mealtime is one aspect of the family environment [19]. Several health and social benefits are associated with increased frequency of family meals. When family meal style is about placing platters on the table, and everyone serves him/herself, this can help children to be responsible for choosing their food and regulate their energy intake depending on their innate abilities (Mogharreban & Nahilian-Nelms, 2002). Family meal is a time for connectedness and encouragement of health-related behavior [18]. Conversation about healthy eating and nutrition topics is associated with having family dinner; this increases nutritional knowledge among children (Gillespie & Achterberg, 2000). Positive association has been suggested between the frequency of eating family meals and healthy eating (Neumark-Sztainer, 2003).

During the mealtime, parents use some direct and indirect feeding attempts to control their children eating behaviors [9]. These feeding strategies could influence children's weight status and eating behavior, but they can also be a reaction to parental concern about the weight status. Parents rely on certain feeding methods depending on the child characteristics [5]. Many researchers have studied direct strategies focusing on parents feeding restriction and pressure to eat. In a study conducted by Farrow and Blissett [1], it was found that the use of pressure and restriction with child feeding at age 1-2 years old have predicted lower child weight. This could be attributed to the fact that child's food intake at this young age is controlled by the caregiver, and there is lack of independent eating and access to food [5]. Parents reported "more pressure to eat with children who weigh less or who are more negative at mealtimes" [5]. A study conducted by Campbell, Crawford, and Ball [3] showed a positive relationship between the use of pressure to eat and increased consumption of energy-dense food. This information supports the findings in other studies that there is a positive correlation between pressure to eat and both fat intake and weight gain [4]. However, if the child is overweight, pressure to eat is not used by parents in order to control the child's weight. For example, in an observational study, restrictive feeding strategies were used with overweight children more than with those with normal body weight [11].

According to [21], mothers restrict their children's food intake as a response to their concern with child becoming overweight. The results from this cross-sectional study had some support from longitudinal study by (Spruijt-Metz et al., 2006) that showed that "maternal concern about child weight was associated with lower increase in fat mass 3 years later" [21]. It is also suggested that there is a possibility that mothers use restriction with high food-responsive children because they are concerned with their children's consumption of unhealthy food [20]. Pressuring children to eat is used with children who are more responsive to satiety and less responsive to food, slower eater, food fussier, and enjoyed food less [5, 20]. When children are restricted from some food, they become attractive increasing children's responsiveness of food and "leading to overconsumption when they become freely available" [20].

Indirect control attempts include monitoring the child's eating behavior and modeling of healthy eating [9]. A recent study demonstrated that slower weight gain has been linked to monitoring feeding practices [1]. Modeling feeding strategies were found to be positively associated with healthy eating and lower picky eating behavior [8]. Gregory et al. [9] found a positive association between modeling of healthy eating reinforced by the experience of pleasant feelings and trying new foods.

T.V. exposure during mealtime impacts children's eating. It could be that T.V. viewing causes distraction that inhibit children from eating [3]. However, increased T.V. exposure time had been associated with higher energy intake [3]. Fitzpatrick, Edmunds,

and Dennison [1] had shown that children who watched T.V. during meals consumed less vegetables and fruits. Therefore, the main aim of this study is to explore the relationship between family food environment and the eating behavior around dinnertime among children aged 4 to 6 years old in the Abu Dhabi.

2. Methodology

This study was a cross sectional in nature, as data was collected from the participants once. Quantitative method was used with primary source of data collection which was a questionnaire. It studied the relationship between the home food environment and child's eating behavior around dinnertime. Family food environment data consisted of demographics and some feeding strategies, such as, modeling of eating, pressure to eat, use of reward, and child independence in eating. These were asked in the questionnaire completed by the participants. The study was approved by the ethical committee of Zayed University and all participants signed a consent form. In addition, permission form the head of the school was obtained prior to the study.

The study includes children form 61 families as a convenient sample form one private school in the city of Abu Dhabi. Families of children attending classes of kindergarten 1 and kindergarten 2 were recruited to participate in the study. The questionnaire was distributed to 150 students from each of the 15 kindergarten classes, 10 participants were selected randomly.

Some of the questions utilized in the questionnaires were extracted from other researcher [3], while rest were constructed specifically for this study. All the questions that were utilized in the study were translated to Arabic, and were distributed in both Arabic and English languages. Since, 4-6 years old children are too young to answer the survey's questions, parents were sent a consent form, the questionnaire, and a reply envelope. Two weeks from the distribution, the envelopes were collected from the school. Out of the 150 families with four to six years old children attending this school, 40.7% responded. Only families that consented to be part of the study were eligible for participation.

Child's care-giver completed the questionnaire that consisted of three parts. The first part asked questions about demographic information. The second part contained questions regarding food environment and child eating behavior when the child is having the dinner with the family. The last part asked about information regarding food environment and child eating behavior when the child is eating the evening meal separately. Demographic questions included information about care-giver age, education, relationship with the child in the study, nationality and marital status, perception of own weight status as well as child weight status. Questions about the

number of children under 18 years old and adults above 18 years old were included. Participants were asked some questions on the home food environment. A question on the frequency of the child having dinner with his/her family was included in the questionnaire. Response options ranged from less than once a week to 7 times a week and were collapsed into "less than once a week," "1-2 times," " 3-4 times", "5-6 times", and "7 times". The pressure to eat subscale included 3 questions, which were "If my child says 'I'm not hungry, I try to get him/her to eat anyway", " My child should always eat all the food on his/her plate in dinner" and "I have to make sure that my child eats enough dinner". A score of 12 to 15 points is high and suggested using pressure to eat. Modelling of eating subscale included 3 questions, such as "I am satisfied with how often my family eats the evening meal together" , and "it is difficult to have the evening meal together". A score of 12 to 15 points is high and suggests use of pressure to eat. The use of reward was defined as rewarding the child with interesting things when the child finishes the food or behaves in a good way around the dinner. Use of reward was assessed by using 4 statements, such as "if my child finishes the food, he/she will be rewarded with sweets, watching T.V.,..etc)". A score of 16 to 20 points is high and suggests using reward. Independence of eating was investigated using 4 questions about child independence in eating, and selecting type and quantity of food. The questions assess whether the child is responsible for feeding himself and choosing the type and quantity of food that he/she eat. A score of 7 to 8 points means that a child is independent in eating. Detailed questions about all these different features are provided in the complete questionnaire that is attached. (see appendices) To assess child's eating behavior, a number of questions that covered some eating behavior areas were included. Positive eating behavior is defined as: child enjoys dinner, does not have signs of picky eating behavior and food neophobia, and has good behavior around dinner table. Parents were asked to report their level of agreement to some statements. The scale had 8 items, and scores of 24 points and above are high indicating a better and positive eating behavior.

2.1. Statistics

Statistical analysis was conducted using SPSS software version 18. In order to examine the relationship between some demographic indicators, such as education level and employment status of the child care provider and child eating behavior, *t* test was used. Correlation was conducted to investigate whether there was a correlation between the family food environment elements and child eating behavior. Reliability (internal consistency) was tested for the used scales. $P< 0.05$ was considered statistically significant.

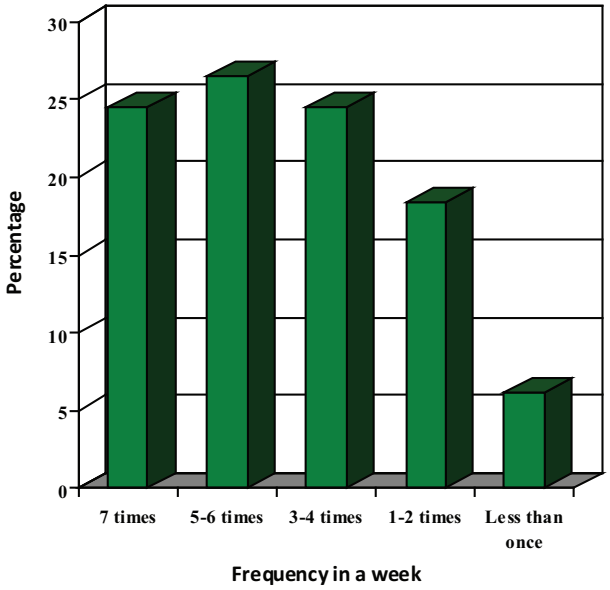

Figure 1: Number of dinners together (child and family) per week.

3. Results

Participants were 61 children, and their primary care providers were 82% mothers, 10% fathers and 7% relatives. Children who were fed by their fathers and other relatives were excluded from the study because of their small percentage in the sample. Data from one case that did not provide enough information in the questionnaire was also deleted. These exclusions reduced the number of cases from 61 to 49.

The age of majority of the mothers (65%) was between 26 to 35 years, while 20% of the them were above 36 years, and 14% were between 20 to 25 years old. The vast majority of the sample (92%) were Emirati, where as the rest were distributed thinly across other regions . Over half of all mothers (53%) were tertiary educated (higher education), and 47% had completed high school or Technical or trade school certificate/ apprenticeship (lower education). Fifty-three percent of mothers were not working, while forty-seven had an employment.

Most of the families had dinner together three times or more a week. Figure 1 presents the percentages of the number of times that the child ate with his/her family at dinner time. Around 69% of mothers found it difficult to have dinner together as a family. Nearly all of the mothers (96%) decided the menu for the family dinner. More than half (51%) of the mothers were responsible for cooking and preparing the meal,

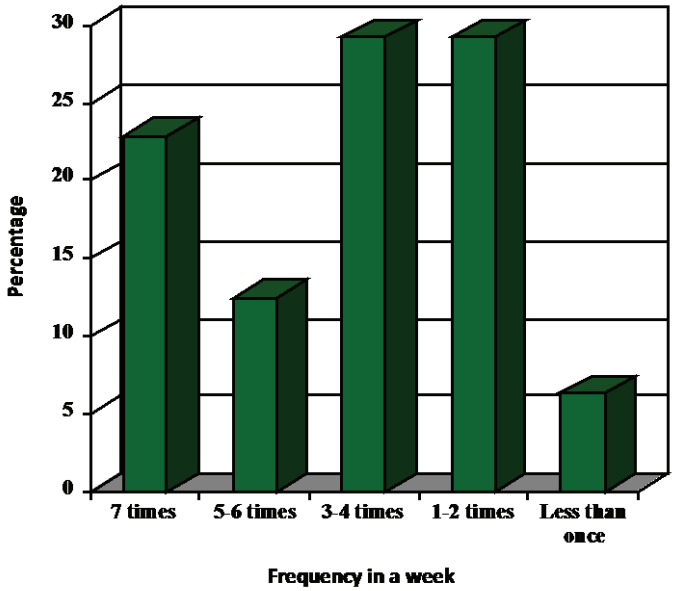

Figure 2: T.V. exposure among children during dinner per week.

while 49% of mothers reported that cooking was their domestic workers (maid or cook) responsibility. A small percentage of children (27%) helped in dinner preparation, while the rest (73%) helped once or less than a month. The proportion of children who enjoyed dinner more than usual when helping in preparation was 64%, whereas 33% enjoyed the meal as usual. The majority of mothers (73%) said that they planned for the dinner in advance. Dinner was considered a pleasant time for 78% of the families, where 82% of the families agreed that dinner was a time for family connectedness and communication. Ninety-two percent of the mothers had not shown support to statement that "the dinner is a time for disagreements", and if disagreements occurred, 78% would happen less than once a month. During dinner time, most mothers reported switching on television. Figure 2 shows child's T.V exposure during dinner in week.

The mean score of child eating behavior was 22.81 (*SD* = 3.84), with 50% scoring 24 points and above. Mothers were using different feeding strategies. Half of the children got a high score in the child's eating behaviour scale, indicating that they had positive eating behaviour. Reliability (internal consistency) was tested for feeding strategies and child eating behavior, and it ranged between .59 - .76 (Table 1).

Modeling of eating and child eating behavior were significantly positively correlated, Pearson's $r = .56$, $p < .01$. There was a significant negative correlation between pressure to eat and child eating behavior, Pearson's $r = -.35$, $p < .01$. There was a

Scale Name	No. of items	Internal consistency Cronbach's Alpha	Mean ± SD	Percentage of application
Modelling of eating	3	.76	11.04 ± 2.13	61%
Pressure to eat	3	.59	13.16 ± 3.07	49%
Use of reward	4	.76	14.08 ± 3.05	31%
Independence of eating	4	.64	6.10 ± 1.22	45%
Child eating behavior	8	.73	22.81 ± 3.84	50%

Table 1: Mean scores, SD, internal consistency scores, and percentage of mothers applying different feeding strategies in 4 to 6 years old children (n = 41).

no significant correlation between use of reward and child eating behavior as well as between independence in eating and eating behavior.

4. Discussion

The aim of the current study was to explore the home food environment and eating behavior among children who are between four to six years old in families living in the United Arab Emirates. In this sample, half of the children ate the evening meal five times or more a week with their families. The other half of the children had their dinner four times or less a week with their families. This shows that some children cannot have dinner more frequently with their families, and a reason for that could be that family members have different schedules. When the family is having dinner together, this meal is shown to be a pleasant time that connects family members together. One of the benefits of family connectedness is that it helps in promoting "health-related behavior and positive self-esteem" [18]. The results of this study showed that most of the mothers plan for the evening meal, and some of them cook for their families. The findings from this study revealed that a lot of children are exposed to television around dinnertime. This is a serious problem because of the epidemic of obesity in the U.A.E [22]. TV exposure is a major contributor to "obesity-promoting dietary outcomes" [3]. A study had shown that T.V. viewing during meals was negatively associated consumption of fruits and vegetables [3]. High T.V. exposure was also linked to an increased energy intake [3]. However, T.V. viewing can cause distraction that stops children from eating [3].

It was hypothesized that mother's employment would negatively impact child's eating behavior. It was also hypothesized that positive eating behavior would increase when mothers had higher level of education. An unexpected finding was that mother's occupation did not affect child's eating behavior in our study. This could be related to

both working and non-working mothers' ability to plan for the dinner. In the U.A.E, employement hours for some jobs that women have do not extend to the evening, which helps mothers to prepare for the meal and offer pleasant time for the children as non-working mothers do. The results of this study revealed that there was a positive association between maternal education and child eating behavior. The reason for this could also be that education may enhance knowledge about the importance of nutrition in health. Possibly, education fosters awareness amongst mothers about the health risks associated with child weight. It is also conceivable that mothers with higher education have an improved problem-solving skills supporting a parental style with high responsiveness to the child's needs, "high demandingness, and autonomy granting" [17].

The study findings suggesst that using pressure as a feeding strategy is negatively associated with positive child eating behavior during the meal. These results were supported by the study of Webber, Cooke, Hill, and Wardle, [20], which examined different feeding strategies and child's eating behavior. They found that forcing children to eat was negatively associated with enjoyment of food and positively associated with food fussiness, which were characteristics of negative eating behavior [20]. Another study had also revealed that pressuring decreased acceptance of new food by children [8]. The development of "common food dislikes can be traced back to children's experiences of being pressured to eat", which suggested that this practice was connected to the "development of food dislikes and rejections" [20]. Eventually, this could also lead to the loss of interest in the meal. One interpretation for the use of this strategy could be that the perceived child weight by the parents could play a role on constructing the type of feeding practice with the child. Parents tend most likely to apply pressure strategy with children that they perceive to be underweight [2]. This may not be beneficial to the child as it might interfere with the child's capacity to regulate his/her energy intake, compromising the ability to respond to internal cues. Another perspective to this issue is that parental feeding strategies were influenced by their children appetitive traits. Research conducted by Farrow, Galloway, and Fraser [1] showed that children with more negative behavior were pressured by their parents to eat. Another qualitative study had reported that mothers modified their feeding practices depending on their children's eating behavior [20]. These examples suggest that the relationship between pressuring and eating behavior could be bi-directional.

The present study demonstrated that modeling was linked to positive eating behavior, which was consistent with the finding that "modelling have a clear influence on how children both think and behave around food" [2]. Eating meal together provides an opportunity for parents to be models for their children "when paired with enthusiastic comments" [12]. Mealtime can also be regarded as learning experience for children

by watching others [12]. Children's eating behavior could also reflect their parents' eating behavior. Evidence had shown that there were "similarities between parents' and children's food acceptance and preferences, intake, and willingness to try new foods" [14].

Use of rewards and prohibiting interesting things to the children were not associated with eating behavior in this sample. This could be attributed to that the different influence that reward could have depending on the context or the situation in which this strategy is applied [2]. Therefore, positive or negative consequences may result. For instance, if the child was rewarded by eating a food in a "coercive or negative context" the conveyed message could be that it is the "consequences of eating badly" thus, he/she start to dislike that food. However, using reward in a positive context, such as positive consequences of eating and indication of child's achievement, could improve consumption and liking of food [10].

The independence in eating was not correlated with eating behavior of children. This finding was nearly consistent with another study conducted by Branen, Fletcher and Myer (1997). In their study, they found that consumption pattern of children, who were allowed to select their food, did not differ from when children were served preselected food [15].

The major strength of this study was that it allowed us to explore the home food environment and child eating behavior in the UAE, since Emirati participants comprised 92% of the sample. This study had some shortcomings too. Time constraint was one of them that lead to a small sample size. Secondly, the children in this study were young (4 to 6 years old), which would not allow the results to be generalized to older ages. Another limitation was that all of the data were reported by mothers and might not be accurate, so observational studies were suggested, but this proposal may not guarantee the possibility of normal interactions between child and parents. Another limitation of the study is the inability to analyze and compare the environment and eating behavior when the child eats alone to the environment and eating behavior when the child eats with the family because of the missing data.

5. Conclusion

This study was in line with other research showing that aspects in the family food environment have an influence on eating behavior of children. It focused on feeding strategies and child's eating behavior around dinner time. Educating parents on food environment and its impact on child's behavior is crucial in order to enable them to develop feeding strategies most likely to benefit children's health. Informing the Ministry of Health and Ministry of Education of the results of this study is important

in achieving this. One suggestion would be offering some sessions on this topic for parents in schools during parents and teachers meetings.

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References

[1] J. Blissett and E. Haycraft, "Are parenting style and controlling feeding practices related?" *Appetite*, vol. 50, no. 2-3, pp. 477–485, 2008.

[2] R. Brown and J. Ogden, "Children's eating attitudes and behaviour: A study of the modelling and control theories of parental influence," *Health Education Research*, vol. 19, no. 3, pp. 261–271, 2004.

[3] K. J. Campbell, D. A. Crawford, and K. Ball, "Family food environment and dietary behaviors likely to promote fatness in 5-6 year-old children," *International Journal of Obesity*, vol. 30, no. 8, pp. 1272–1280, 2006.

[4] H. R. Clark, E. Goyder, P. Bissell, L. Blank, and J. Peters, "How do parents' child-feeding behaviours influence child weight? Implications for childhood obesity policy," *Journal of Public Health*, vol. 29, no. 2, pp. 132–141, 2007.

[5] C. V. Farrow and J. Blissett, "Controlling feeding practices: Cause or consequence of early child weight?" *Pediatrics*, vol. 121, no. 1, pp. e164–e169, 2008.

[6] C. V. Farrow, A. T. Galloway, and K. Fraser, "Sibling eating behaviours and differential child feeding practices reported by parents," *Appetite*, vol. 52, no. 2, pp. 307–312, 2009.

[7] E. FitzPatrick, L. S. Edmunds, and B. A. Dennison, "Positive Effects of Family Dinner Are Undone by Television Viewing," *Journal of the Academy of Nutrition and Dietetics*, vol. 107, no. 4, pp. 666–671, 2007.

[8] A. T. Galloway, L. Fiorito, L. A. Francis, and L. L. Birch, "Finish your soup: counterproductive effects of pressuring children to eat on intake and affect," *Appetite*, vol. 46, pp. 318–323, 2006.

[9] J. E. Gregory, S. J. Paxton, and A. M. Brozovic, "Maternal feeding practices, child eating behaviour and body mass index in preschool-aged children: A prospective

analysis," *International Journal of Behavioral Nutrition and Physical Activity*, vol. 7, article no. 55, 2010.

[10] C. F. Lowe, P. J. Horne, K. Tapper, M. Bowdery, and C. Egerton, "Effects of a peer modelling and rewards-based intervention ot increase fruit vegetable consumption in children," *European Journal of Clinical Nutrition*, vol. 58, no. 3, pp. 510–522, 2004.

[11] E. Moens, C. Braet, and B. Soetens, "Observation of family functioning at mealtime: A comparison between families of children with and without overweight," *Journal of Pediatric Psychology*, vol. 32, no. 1, pp. 52–63, 2007.

[12] S. N. Moore, K. Tapper, and S. Murphy, "Feeding strategies used by mothers of 3-5-year-old children," *Appetite*, vol. 49, no. 3, pp. 704–707, 2007.

[13] J. K. Orrell-Valente, L. G. Hill, W. A. Brechwald, K. A. Dodge, G. S. Pettit, and J. E. Bates, ""Just three more bites": An observational analysis of parents' socialization of children's eating at mealtime," *Appetite*, vol. 48, no. 1, pp. 37–45, 2007.

[14] H. Patrick and T. A. Nicklas, "A review of family and social determinants of children's eating patterns and diet quality," *Journal of the American College of Nutrition*, vol. 24, no. 2, pp. 83–92, 2005.

[15] C. Robertson, *Safety, nutrition and health in early education*, Wadsworth Publishing, New York, 4th edition, 2009.

[16] R. R. Rosenkranz and D. A. Dzewaltowski, "Model of the home food environment pertaining to childhood obesity," *Nutrition Reviews*, vol. 66, no. 3, pp. 123–140, 2008.

[17] J. Saxton, S. Carnell, C. H. M. van Jaarsveld, and J. Wardle, "Maternal Education Is Associated with Feeding Style," *Journal of the Academy of Nutrition and Dietetics*, vol. 109, no. 5, pp. 894–898, 2009.

[18] M. Marquis and B. Shatenstein, "Food choice motives and the importance of family meals among immigrant mothers," *Canadian Journal of Dietetic Practice and Research*, vol. 66, no. 2, pp. 77–82, 2005.

[19] J. Utter, R. Scragg, D. Schaaf, and C. Ni Mhurchu, "Relationships between frequency of family meals, BMI and nutritional aspects of the home food environment among New Zealand adolescents," *International Journal of Behavioral Nutrition and Physical Activity*, vol. 5, article no. 50, 2008.

[20] L. Webber, L. Cooke, C. Hill, and J. Wardle, "Associations between children's appetitive traits and maternal feeding practices," *Journal of the Academy of Nutrition and Dietetics*, vol. 110, no. 11, pp. 1718–1722, 2010.

[21] L. Webber, C. Hill, L. Cooke, S. Carnell, and J. Wardle, "Associations between child weight and maternal feeding styles are mediated by maternal perceptions and concerns," *European Journal of Clinical Nutrition*, vol. 64, no. 3, pp. 259–265, 2010.

[22] WHO, United Arab Emirates Global School-based Student Health Survey. Geneva 2005; Retrieved October 13, 2009, from

http://www.who.int/chp/gshs/2005_United_Arab_Emirates_GSHS_Country_Report.pdf.

[23] WHO, Risks to oral health and intervention. Geneva n.d.; Retrieved March 17, 2009, from http://www.who.int/oral_health/action/risks/en/index.html.

[24] S. J. Woodruff and R. M. Hanning, "A Review of family meal influence on adolescents' dietary intake," *Canadian Journal of Dietetic Practice and Research*, vol. 69, no. 1, pp. 14–22, 2008.