A CROSS-CULTURAL EXAMINATION OF PARENTING STYLE AND FEEDING PRACTICES

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DEDICATION

In loving memory of Ruby Mae Alexander

A CROSS-CULTURAL EXAMINATION OF PARENTING STYLE AND FEEDING PRACTICES

by

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Childhood obesity is an issue of great concern to health professionals in the United States. Past research has emphasized the role parenting styles (e.g., the global parenting environment) and parents' practices (e.g., specific parent behaviors) play in shaping childhood weight status. This study is the first to examine the associations of parenting style, feeding practices and children's self-regulation of food intake in a South Asian population. Self-report data was collected from a community sample of South Asian parents with children between the ages of 3 to 9 years old (N = 54). Participants were 75% mothers and 25%

fathers. Feeding practices were compared between South Asian mothers and data from a control group that was collected from an ongoing study. Survey items measured parenting style dimensions of warmth, psychological control, and behavioral control. Parents' controlling feeding practices of pressure, restriction for health and restriction for weight were also assessed. Self-regulation was measured by parent's report of child's external eating and food responsiveness, as well as satiety responsiveness. Results of this study revealed South Asian mothers used more pressure in feeding than Caucasian mothers, but did not use more restriction. Acculturation was not associated with parenting style dimensions or feeding practices, but was associated with external eating. The parenting style dimension of psychological control was positively correlated with restriction for health and pressure. Psychological control and restriction for health were associated with external eating, while these variables and restriction for weight were associated with food responsiveness. Regression analyses suggest that restriction for health was the best predictor for both of these variables. Restriction for weight was related to satiety responsiveness, but this variable was not significant after controlling for child weight status. The results of this study are consistent with previous research on feeding practices and self-regulation. Parenting interventions targeting child obesity should consider teaching parents to employ less controlling feeding practices, as these methods were associated with lower self-regulation ability in children.

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CHAPTER ONE
Introduction

Childhood obesity is a rapidly emerging global epidemic that has profound public health consequences (Bellizzi & Dietz, 1999). Along with the increase in the prevalence rates of childhood obesity are increases in related physical ailments, such as hypercholesterolemia, dyslipidemia, hypertension, hyperinsulinism, insulin resistance, impaired glucose tolerance, diabetes mellitus, asthma, obstructive sleep apnea syndrome, and gastrointestinal problems (Krebs & Jacobson, 2003). Additionally, overweight children typically become overweight adults who continue to have negative health outcomes (Magarey, Daniels, Boulton, & Cockington, 2003).

The prevalence rates and associated health burdens of childhood obesity are greater among ethnic minorities than Caucasians, but the etiology of these differences is not well understood (Anderson, Hughes, Fisher, & Nicklas, 2005; Kumanyika, 2008). Although South Asians are the third fastest growing population in the United States (US Bureau of Census, 2000), research related to obesity in South Asian children is limited. Some studies suggest that South Asian children have a higher incidence of overweight status (27% higher; Balakrishnan, Webster, & Sinclair, 2008) and have more visceral fat and insulin resistance than White children, regardless of waist circumference (Whincup et al., 2002). While the prevalence rate of childhood obesity is not as high for South Asian children compared to other ethnic minority groups, South Asians are at greater risk for

weight-related health problems than other populations (Abate & Chandalia, 2001; Enas, 2007; Kumanyika & Grier, 2006). Thus, research examining factors related to the development of obesity in South Asian children living in the United States is warranted.

There are multiple factors that contribute to childhood obesity, including genetic and environmental contributions (Faith et al., 2004; Herbert et al., 2006; Strauss & Knight, 1999). Previous research highlights the role that parenting styles and parental feeding practices play. Dominating, controlling parenting styles and feeding practices have been associated with problematic eating behaviors and overweight status (Carper, Fisher, & Birch, 2000; Faith & Kerns, 2005; Rhee et al., 2006). Although few studies have examined both parenting style and parental feeding practices within the same study, researchers have postulated that parenting styles and practices are both important in predicting children's eating patterns (Rhee, 2008; Ventura & Birch, 2008).

While research examining parenting style and parent feeding practices in South Asian families is limited, there is some evidence that suggests that South Asian mothers tend to use Authoritarian parenting styles and controlling feeding practices more than Caucasians (Hackett & Hackett, 1994; Jambunathan, 2000). However, previous studies have only examined the prevalence of controlling practices and not their relation to child outcomes. In addition, research on the feeding practices of South Asians may depend on mothers' acculturation (Dosnajh

& Guhman, 1997). Comprehensive research involving the under-studied South Asian population is needed to better understand the cultural context in which the parent-child feeding interactions are embedded. This study examines associations between acculturation, parenting styles, parental feeding practices, and children's ability to self-regulate food intake within a South Asian population. Additionally, comparisons were made between the feeding practices of South Asian and Caucasian mothers.

CHAPTER TWO
Review of the Literature

The Importance of Culture

Over the past few decades, there has been increased recognition that culture plays an important role in shaping human behavior. Culture reflects patterns of behavior, values and traditions that are transmitted to members of a particular group (Redfield, Linton, & Herskovits, 1936). Culture may influence the way in which parents socialize their children, including their children's eating behavior, through mothers' use of traditional foods, cooking and feeding behaviors (Kagitcibasi, 1996; Ogbu, 1994).

One way that different cultures are categorized is as collectivistic and individualistic. Members of collectivist cultures generally place an emphasis on the values, beliefs and attitudes of the group or the family. In South Asian culture, a strong attachment to and sense of responsibility for the family are important (Segal, 1991). As such, family harmony and interdependence are highly encouraged (Dhruvarajan, 1993; Ranganath & Ranganath, 1997; Segal, 1991). The patterns found in many European American families may contrast with those of South Asian families because members of individualistic groups tend to put a high value on independence and autonomy (Ranganath & Ranganath, 1997; Segal, 1991). Typical European American families tend to be nuclear, egalitarian, and promote self-sufficiency.

Another factor to consider when conducting cross-cultural research is acculturation. This process occurs when an individual from one culture comes into contact with another culture (Redfield at al., 1936). During this process a person may identify with their culture of origin (separation), the dominant culture (assimilation), neither (marginalization) or both (integration; Berry, 1997). Taking acculturation into account when studying minority groups in the United States is valuable because parents are often influenced by the dominant culture (Park, Paik, Skinner, Ok, & Spinder, 2003). If parents are bicultural, they may endorse parenting styles and practices similar to the dominant culture while retaining practices that are reflective of traditional cultural values. Previous studies have found that cross-cultural differences may disappear once level of acculturation is taken into account (Dosnajh & Ghuman, 1997; Querido, Warner, & Eyberg, 2002).

Parenting Styles and Practices

Both parenting style and parenting practices contribute to understanding the socialization process. Although related, these are distinct concepts. Parenting style describes parent-child interactions across a wide range of situations and represents the atmosphere (e.g., context or environment) within which parent-child interactions take place (Darling & Steinberg, 1993). Parenting practices, on the other hand, are defined as parenting behaviors that are aimed at specific child outcomes, such as parental feeding practices or teaching table manners (Darling & Steinberg, 1993). Parenting practices are measured in terms of the frequency of

certain behaviors rather than the quality of the behavior or styles (Stewart, Bond, Kennard, Ho, & Zaman, 2002). In sum, Darling and Steinberg (1993) propose that parenting style is best conceptualized as the context that influences the effectiveness of specific parenting practices.

Previous research on parenting styles. Baumrind (1971) identified three different parenting style typologies: Authoritarian, Authoritative, and Permissive. Authoritarian parents are highly demanding and unresponsive. They expect rules to be followed without explanation and attempt to control their children according to their own set of standards by emphasizing obedience, respect for authority, and order (Baumrind, 1991). Authoritative parents, on the other hand, maintain an effective balance between being demanding and being responsive. These parents are warm and supportive. Authoritative parents encourage bidirectional communication, validate the child's individual point of view, and recognize the rights of both the parents and child (Baumrind, 1991). Permissive parents are defined as affirming, accepting and available to the child, but do not discipline (Baumrind, 1991). Parents categorized as permissive may also be uninvolved and show little warmth or acceptance (Maccoby & Martin, 1983).

Using Baumrind's (1971) framework for understanding parenting style, parents are categorized into groups based on the level of warmth and control they use with their child. Some researchers assert that measuring parenting style using this typology is beneficial because it captures the interaction between dimensions of parenting. While this may be true, in the United States, using Baumrind's

typologies may only be valid with middle-class, Caucasian families because these typologies reflect patterns of parent behaviors that have been observed over years of research with this specific population (Maccoby & Martin, 1983).

Although the conceptual framework underlying parenting style typologies is used pervasively throughout the literature, even Baumrind (1991) admits it is difficult to translate this parenting style framework across cultures, even to cultural groups that reside within the United States. For example, the Authoritative parenting style typology has long been thought to be the ideal style for European American families. This parenting style is consistently associated with positive outcomes in middle-class, Caucasian children; however, research has shown mixed outcomes when examined in different cultural groups (Steinberg, Lamborn, Dornbusch, & Darling, 1992). Authoritative parenting style is associated with academic achievement among European-American adolescents, but is not associated with academic achievement of Asian-American and African-American youth (Glasgow, Dornbusch, Troyer, Steinberg, & Ritter; 1997; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Steinberg et al., 1994). Authoritarian parenting style is associated with fearful and timid behavior among European-American children (Deater-Decker & Dodge, 1997), but is associated with assertiveness among African-American girls (Steinberg, Mounts, Lamborn & Dornbusch, 1991).

Given that it is difficult to generalize the parenting style typology framework across cultures, an alternative approach to studying parenting style has

been used. Cross-cultural researchers recommend dismantling typologies into their component parts or dimensions (Barber, 1996; Darling & Steinberg, 1993; Stewart et al., 2002). For example, instead of examining the relationship between Authoritative parenting style and child outcomes, the variables of demandingness and responsiveness can be examined separately with respect to child outcomes. This dismantling of typologies into single dimensions is especially useful when studying cultures other than the culture in which the typology emerged and allows for greater generalizability in studying parenting styles across cultures (Bean, Barber, & Crane, 2006; Stewart et al., 1999; 2002). Additionally, dimensions may provide a more accurate picture of the relationships between variables. When using typologies in research, it may be unclear which component of the typology is associated with the outcome variables. Examining the relationship between single dimensions and outcomes may lead to a more clear understanding about the relationship between variables (Stewart et al., 1999; 2002).

Research suggests that warmth, behavioral control and psychological control are three parenting dimensions that have cross-cultural relevance (Barber, 1996; Steinberg et al., 1999). These three parenting style dimensions are the most widely studied and appear to be associated with similar outcomes in children across cultural groups (Barber, 1996; Steinberg et al., 1991; Stewart et al., 2002).

Parental warmth. Warmth refers to parents' general tendencies to be supportive, affectionate, and sensitive to their children's needs. Parents high in

warmth express approval and direct positive emotions and behaviors toward their children. Parental warmth is related to positive outcomes in children across cultures, including children's positive emotional functioning (Bean et al., 2006). In a meta-analysis of 43 studies from several countries, findings revealed that regardless of culture, ethnicity, or geographic location, approximately 26% of the variability in youths' positive psychological adjustment was accounted for by perceived parental warmth (Khaleque & Rohner, 2002; Khaleque, Rohner, Riaz, Laukkala, & Sadeque, 2007). Parental warmth has also been related to academic success and positive well-being across cultures (Bean et al., 2006; Stewart et al., 1999). Warmth is considered a "universal" parenting style meaning that is associated with positive outcomes regardless of culture (Bean et al., 2006; Barber, 1996).

Interestingly, parental warmth and sensitivity has also been associated with healthy behaviors in children including greater consumption of fruits and vegetables and increased physical activity (Kremers, Brug, de Vries, & Engels, 2003; Schmitz et al., 2002). One study even found that parental warmth was associated with decreased risk for overweight status in children (Rhee et al., 2006). However, this research has not focused exclusively on South Asian families.

Although warmth has been associated with positive parenting, parental warmth may be expressed differently across cultures (Kagitcibasi, 1996; Stewart et al., 1999). In Western culture, warmth is typically expressed through positive

verbal and nonverbal affectionate communication between parent and child. In collectivist cultures, warmth may be demonstrated through supportive behaviors, such as helping with schoolwork (Chao & Aque, 2009; Schludermann & Schludermann, 1983).

Behavioral control. Behavioral control is a dimension of parenting that is characterized by how much parents supervise and monitor their children's behavior. Behavioral control is demonstrated through the rules, regulations, and restrictions that parents employ. Behavioral control is associated with positive outcomes, such as enhanced academic functioning and positive emotional and behavioral adjustment in children across cultures (Barber, Maughan, & Olsen, 2005; Bean et al., 2006; Steinberg, Elemen & Mounts, 1989; Wang, Pomerantz & Chen, 2007). Previous research has found that behavioral control is associated with fewer externalizing problems in children across cultures (e.g., antisocial behavior, school deviance, and delinquency; Barber et al, 1994). Developmentally, children benefit from environments where parents provide and administer structure through the use of appropriate discipline, rules and consequences (Barber, 1996; Steinberg et al., 1989).

Behavioral control may be related to the Asian parenting style referred to as "guan*",* which translated means "to govern." Although some aspects of *guan* may be viewed as harsh or strict in individualist societies, this parenting style is considered normative and equated with concern and caring by Asian children (Chao, 1994). Parents' motivations or intentions for imposing strict standards are

not to dominate the child, but rather to assure the familial and societal goals of harmonious relations with others are maintained (Lau & Cheung, 1987). "Guan", like Baumrind's typologies, was created in a particular cultural context, which may or may not translate directly to Western culture (Stewart et al., 2002; Wu et al., 2002). Although behavioral control may manifest differently across different cultural groups, the core dimensions of supervision and monitoring of the child, is similar across cultures (Stewart et al., 1999; 2002; Wang et al., 2007).

Psychological control. Psychological control refers to a parenting style dimension that involves coercive and intrusive control strategies (Smetana & Daddis, 2002). Psychological control is demonstrated by parenting behaviors, such as constraining children's verbal expression, invalidating feelings, using personal attacks, guilt induction, and love withdrawal. When parents use psychological control, it may hinder the child's sense of autonomy (Deci & Ryan, 2000). Use of parental psychological control has also been associated with poor social relationships and separation anxiety in children (Nucci, Killen, & Smetana, 1996; Seligman & Peterson, 1986).

Some researchers have suggested that psychological control does not affect Asian children in the same way as European-American children because in Asian cultures psychological control would not be viewed as an intrusion to the child (Chao, 1994, Chao & Tseng, 2002; Greenfield et al, 2003). However, most studies have found that psychological control is associated with negative outcomes in children regardless of culture (Barber, Chadwick & Oerter, 1992;

Wang et al., 2007). Psychological control is also associated with internalizing behaviors, such as loneliness, low self-esteem, isolation, confusion, and sad affect in children across cultures (Barber, Olsen, & Shagle, 1994; Wang et al., 2007). A cross-cultural study of preschoolers showed that parental psychological control was related to internal and external problems; however, gender differences were observed between cultures (Olsen et al., 2002).

Parenting Practices

There are many ways in which parents influence and socialize their children. One way is through their parenting practices. Parenting practices are different from parenting styles in that they refer to specific parenting behaviors that may vary over time and across situations. Parenting practices are domain-specific. Although many domains could be examined, this study focused on the domain of feeding.

Feeding practices are parenting behaviors that describe how parents feed their children during meal or snack times (Birch & Fisher, 1998). Restrictive and pressuring feeding practices are two of the most commonly researched feeding practices. Pressure is a feeding practice in which parents attempt to increase their children's food intake by prompting or encouraging the children to eat more food, while restriction refers to the extent to which parents limit their children's access to foods (Faith et al., 2004). Research has identified two types of restriction that differ based on the motivation behind the restriction. Restriction for health occurs when parents attempt to control food intake with the purpose of limiting

unhealthy foods; whereas, restriction for weight occurs when parent's attempt to control of their child's food intake with the purpose of decreasing or maintaining the child's weight status (Musher-Eizenman & Holub, 2006, 2007).

Research suggests that most children have an innate ability to self-regulate their food intake (Fomon, 1975; Fox, Devaney, Reidy, Razafindrakoto, & Ziegler, 2006; Rolls, Engell & Birch, 2000). However, controlling parenting practices, such as pressure or restriction, may interfere with children's ability to attend to their own internal satiety cues (Birch & Fisher, 2000). When controlling practices are used, children may instead rely upon external cues (parents' guidance, portion size) rather than internal cues related to feelings of hunger and fullness to determine how much to consume. This impairment in self-regulation that results in over-eating is referred to as externally motivated eating or eating in the absence of hunger. Children may also show problems with self-regulation based on their eating behaviors during mealtime. For example, Wardle et al. (2001) describe satiety responsiveness as children's ability to perceive fullness during the course of a meal.

Maternal restriction has been associated with externally motivated eating and overweight status (Faith, Scanlon, Birch, Francis, & Sherry, 2004; Fisher & Birch, 1999; Francis & Birch, 2005). Parents that reported more restriction at age 5 had children that exhibited more externally motivated eating behaviors at age 7 (Birch, Fisher, & Davison, 2003). The motivation for parents' use of restriction may be associated with child outcomes. For example, some studies found that

restriction for weight was a better predictor of externally motivated eating in children than restriction for health (Musher-Eizenman, 2006; Musher-Eizenman, de Lauzon-Guillain, Holub, Leporc, & Charles, 2009).

Parents typically use pressure in feeding to increase their children's food intake. Mothers who use pressure as a primary feeding strategy usually do so out of concern that their children are underweight. Pressure is usually associated with pickiness and restrained eating (Carruth & Skinner, 2000; Francis, Hofer, & Birch, 2001; Van Strien & Bazelier, 2007). In an observational study, researchers found that after a child refused to eat and the parent prompted the child to eat more, the child consumed more food (Orrell-Valente, Hill, Breechwood, Pettite, & Bates, 2007). Although the child may consume more in the short term, use of pressure during feeding may be counterproductive and impair healthy recognition of internal hunger, which leads to problems with self-regulation (Drucker, Hammer, Agras, & Bryson, 1999; Galloway, Fionto, Lee & Birch, 2006; Johnson & Birch, 1994).

Culture and parental feeding practices. Existing research on parental feeding practices in minority cultures has focused largely on Latino- and African-American families. Results from these studies suggest that culture does play a role in parental feeding practices. In general, parents in minority cultures tend to exhibit controlling feeding practices, including the use of pressure and restriction (Hughes, Power, Fisher, Mueller & Nicklas, 2005).

A study of Asian mothers' feeding practices in Japan found that, in general, Asian mothers appeared to use more pressure than mothers in the United States (Geng et al., 2009). There is also some evidence that suggests that the feeding practices of South Asians may be characterized as controlling. A study conducted in the U.K. found that South Asian mothers were significantly more likely to endorse that their children were not allowed to leave food on his/her plate than Caucasian mothers (Hackett and Hackett, 1994). At the same time, these mothers were more willing to offer alternative food options than Caucasian parents. Research using well-validated measures with South Asian populations is limited.

The influence of culture on mothers' parenting style and practices depends on their level of acculturation. Some mothers may be more affected or influenced by the dominant culture than others and this can be reflected in their feeding practices (Arredondo et al., 2006; Kaiser, Megar-Quinunez, Lamp, Johns, & Harwood, 2004). For example, a study on Korean Americans found that more acculturated mothers dined out more and did not prefer or cook traditional foods (Park, Paik, Skinner, Ok, & Spindler, 2003).

Although Asian Americans have a lower prevalence of overweight status compared to other U.S. ethnic minorities, their risk of being overweight increases with acculturation to the U.S. (Unger et al, 2004). Dietary acculturation refers to a decrease in the consumption of traditional foods and an increase in foods from the host country (Romero-Gwynn & Gwynn, 1997). One study found that after

immigration, South Asians in the United States had decreased consumption of traditional mixed dishes (legumes, and/or vegetables) and increased consumption of fruit juice, chips, fruit, cheese, margarine, American bread, and soft drinks (Karim, Bloch, Falciglia, & Murthy, 1986; Raj, Ganganna, & Bowering, 1999). For children, dietary acculturation may manifest as an increase in intake of "American" foods, such as pizza and hamburgers (Unger et al., 2004).

Another aspect of acculturation to consider beyond dietary acculturation involves conflict that may arise between pressure to conform to parental cultural values and the values of the dominant culture (McCourt & Waller, 1995). Traditional South Asian parents may use more control in parenting and children may perceive this control as excessive compared to their Caucasian peers (Jambunathan, 2000). It is theorized that a sense of lack of control may lead children to attempt to gain more internal control through eating disorders, such as bulimia or anorexia (McCourt & Waller, 1995). This theory is supported by a study which found that in a sample of 14- to 15-year-old South Asian girls, high levels of bulimic attitudes and disordered eating behaviors were partially explained by their perceptions of their mothers as over-controlling (McCourt & Waller, 1995).

Overall, extant research suggests that culture has an impact on the parent-child feeding relationship (Hughes et al., 2005). Given the paucity of research on South Asian American parents' feeding practices using well-validated measures, it is unknown what role culture plays on the parental feeding practices in this

group. Previous research on "dietary acculturation" and culture conflict, suggest that acculturation may be related to unhealthy eating patterns. It is possible that acculturation may also impact parents' feeding practices and children's subsequent eating behaviors. There is a strong need for research using well-validated measures of feeding to examine understudied populations such as South Asian families.

Integrating parenting styles and practices. Past research has assumed that there is a direct relationship between parenting style and feeding practices (Fisher & Birch, 1998). However, this research has been mixed. Duke et al. (2004) found that Authoritarian parenting style was related to mothers' use of pressure for their sons but not their daughters, while Blissett and Haycroft (2008) did not find this relationship. Recent research indicates that the relationship between parenting style, feeding practices and child eating outcomes is complicated (Musher-Eizenman & Holub, 2006; Rhee, 2008; Ventura & Birch, 2008). Although few studies have examined more complex interactions, recent researchers speculate that the association between specific parent feeding behaviors and children's eating behaviors depend on the "socioemotional climate" (i.e., the parenting style) in which feeding takes place (Rhee, 2008; Ventura & Birch, 2008). For example, parental restriction within the context of a controlling parenting style is associated with low self-regulation of food intake in children (Musher-Eizenman & Holub, 2006). In contrast, in a less controlling, Authoritative environment, the negative effects of restriction are attenuated

(Musher-Eizenman & Holub, 2006). In other words, it appears as though a positive parent-child relationship can moderate the negative effects of controlling feeding practices. However, because Baumrind's parenting style typology was used in the Musher-Eizenman and Holub (2006) study, it is unclear which aspect of the typology is contributing to children's diminished ability to self-regulate—psychological control, behavioral control or warmth.

Goals of the Study

In summary, there have been no empirical studies to date that look at parenting style and feeding practices concurrently within the South Asian community. Previous studies on parenting style and feeding practices have focused mainly on middle-class, Caucasian families, and research on minorities in the United States tends to focus primarily on Latino- and African-American families.

The primary goals of the study were to: (1) examine if differences exist between South Asian and Caucasian mothers' feeding practices, (2) investigate whether parents' acculturation is associated with parenting style dimensions and feeding practices (3) explore the relationship between parenting style dimensions and feeding practices, and (4) look at the relationships between South Asian parents' parenting style, feeding practices and children's eating outcomes.

First, this study compared the relationships between parenting style dimensions and parental feeding practices in a sample of South Asian and Caucasian mothers. Research suggests that South Asian mothers use more control

in feeding (Hackett & Hackett, 1994). Therefore, it is expected that South Asian mothers will report more pressure, restriction for health and restriction for weight than Caucasian mothers.

Second, this study examined the role of acculturation in parenting style and parental feeding practices. Previous research found that in minority families, parents' level of acculturation was related to authoritarian parenting styles and controlling feeding practices (Arredondo et al., 2006; Kaiser et al., 2001). Therefore, it is anticipated that South Asian parents' acculturation will also be associated with parenting styles and practices. It was anticipated that less acculturated parents would report using more psychological and behavioral control and more controlling feeding practices (pressure, restriction for health and restriction for weight) than more acculturated parents.

Third, this study explored the relationship between parenting style and feeding practices. Previous research on parenting style and feeding practices has found mixed results (Blissett & Haycroft, 2008; Duke et al., 2004). It was hypothesized that behavioral control would be associated with higher levels of restriction for health, restriction for weight and pressure because behavioral control reflects structure and discipline which may be related to the way parents feed their children. Psychological control is expected to be associated with restriction for weight because both may be related to having high expectations for the child. It was expected that warmth would not be associated with controlling feeding practices.

Fourth, this study explored the relationship between parenting style dimensions, controlling parental feeding practices, and children's self-regulation. There is substantial research that suggests that restriction has been associated with increased eating in the absence of hunger, while pressure has been associated with restrained eating patterns and underweight status (Fisher & Birch, 1999; 2002; Johnson & Birch, 1994). Thus, it is hypothesized that restriction for health and restriction for weight will be related to external eating and food responsiveness, but negatively associated with satiety responsiveness. Pressure was expected to be related to external eating and food responsiveness; however, these children were expected to show satiety responsiveness (ability to perceive fullness during a meal). It is expected that behavioral control and psychological control would be associated with external eating, food responsiveness, and negatively correlated with satiety responsiveness. It was not expected that warmth would be related to external eating, food responsiveness or satiety responsiveness. It is expected that when both parenting styles and feeding practices are considered that feeding practices will predict self-regulation above and beyond parenting style.

There is some evidence that the relationship between feeding practices and children's self-regulation may be associated with the parenting style or quality of the parent-child relationship (Musher-Eizenman & Holub, 2006; Rhee, 2008; Ventura & Birch, 2008). Although this has not been examined in various cultural groups and evidence for these complex relationships is minimal, this study will

examine whether parenting style dimensions moderate the relationship between parental feeding practices and children's self-regulation in eating.

CHAPTER THREE
Methods

Participants

Fifty-eight participants were recruited through a convenience sampling method. Three parents were excluded because their children were not in the targeted age group. One parent only completed a small number of items, so this data was also excluded. The final sample included 54 parents (75% mothers, 25% fathers). The average age of participants in this study was 37.15 years (SD = 4.82; Range: 29 – 49 years). Mothers and fathers reported on children between the ages of 3 and 9 (M = 6.54 years, SD = 1.42). Almost all of the participants identified their race as Asian (98%), although and 1 participant identified as Mixed/Other. When asked about which ethnic group best describes them (paper survey) or about their country of origin (online survey), most participants (87%) identified as Indian, 11% identified as Pakistani, and 2% identified as Bangladeshi. Parents also reported on their highest education level completed, 2% reported some high school, 2% some college, 17% college degree, 6% some graduate work, 57% master's degree, and 15% reported a doctoral or professional degree. Parents varied in their reports of total family combined income—11% reported income in the under $15,000 range, 9% in the $15,000-$35,000 range, 2% in the $35,000 - $55,000 range, 9% in the $55,000-$75,000 range, 7% in the $75,000-$95,000 range, 29% in the $95,000 - $115,000 range, 18% in the $115,000 - $135,000

range, 4% in the $135,000 -$155,000 and 11% over $155,000.

Parental BMI (Body Mass Index; kg/m^2) was calculated based on parents' report of their own height and weight, and ranged from 18.3 to 33.1 (M = 23.8; SD = 3.3). Using CDC classifications (CDC, 2010), 2% were classified as underweight, 71% as normal weight, 18% as overweight and 9% as obese. Parents also reported on the height and weight of their child. BMI percentiles were calculated based on the child's age and gender using the Epi Info Version 3.5.1 computer program that uses CDC growth charts (CDC, 2010). Nineteen parents did not report on their child's height or weight. Five parents did not report on some other aspect of their child (birthdate, gender) that was needed to calculate BMI percentile. There were 5 BMI percentile scores that were discarded due to obvious reporting errors (i.e., the BMI percentile was greater than 3 SD and the individual height or weight reports were also out of bounds). For those with complete data (n = 29), child BMI percentiles ranged from the 5^{th} percentile to 99^{th} percentile (M = 49.82; SD = 33.99). Based on BMI percentiles, 3% of children in this study would be classified as underweight, 70% as normal weight, 10% as overweight and 17% as obese.

Procedure

Participants were recruited through a convenience sampling method from various religious organizations, elementary schools, cultural organizations, and cultural events. Recruitment was also done through face to face recruiting, snowball sampling, posting fliers at South Asian grocery stores, website classified

ads, and by emailing contacts of the researchers. Participants were informed that this study was being conducted as part of a dissertation project in order to gain a better understanding of the experiences that South Asian parents have while parenting and feeding their children. Participants were also informed that there was limited data available for this group and that their responses would be instrumental for learning more about this community. Initially, this study was primarily interested in mothers' responses, but given the low response rate, and a larger than anticipated response from fathers, fathers were also included as part of the study. Three participants were not included in the analyses because their children did not meet inclusion criteria.

The survey was administered in both paper and online formats. Those completing paper surveys mailed their completed surveys in self-addressed envelopes. Only one parent from each family was encouraged to participate to ensure that the participant responses were independent. Participants were not individually compensated for their participation; however, they were given the option to provide their contact information to enter into a raffle to win a $50.00 gift certificate to Target. One participant, a University of Texas at Dallas student, was given research credit for participation. All participants were given the option to receive a summary of the results of the study if they wished.

All participants included in this study were above 18 years of age, self-identified as South Asian and were fluent in the English language (all the questionnaires and the instructions were presented in English). Parents were

required to have a child between the ages of 3 to 8 years old to participate in the study. If a parent had more than one child that fell within this age range, they were asked to base their responses on the child whose name came first alphabetically. Participation was completely voluntarily and participants were told that they could discontinue the study at any time without penalty.

The University of Texas at Dallas Institutional Review Board approved all aspects of this research. Additionally, the primary investigator and all staff involved in this project made certain that participants' rights were maintained. To assure confidentiality, consent forms were kept in a separate location, identifying and personal information was removed from data, and data was stored in a secure area. The recruitment period lasted for 7 months, beginning in May of 2010 and ending November of 2010.

Comparisons for feeding practices were made using a control group of Caucasian parents selected from four previous studies (Holub, unpublished data). Although the current study included both mother and father reports, only mothers were included in these analyses because the control group data sets did not include fathers. Children were selected from control group data based on gender and age (within 3 months). In addition, an attempt was made to match on BMI percentile. However, due to missing data, in the current sample for BMI percentile and difficulties in finding comparable BMI percentiles, participants were not completely matched on BMI percentile. Indeed, there were mean differences in reported BMI percentiles for the final sample, $t(47) = 2.32$, $p = .02$.

Demographic information for South Asian mothers and control were compared and it appeared that the samples were from similar educational and socio-economic backgrounds (Table 1).

Measures

Acculturation. Acculturation was measured by parents' endorsement of items on the Suinn-Lew Asian Self-Identity Acculturation scale (SL-ASIA; Suinn et al., 1987; Appendix A). This 21-item measure has been used across various Asian communities, including South Asian, to assess for level of acculturation (Devdas & Rubin, 2007). The SL-ASIA has items related to the following aspects of culture: language, identity, friendships, behaviors, generational and geographic background, and attitudes (Suinn, Koo, & Ahuna,1995). Example items include, "What is your food preference?" or "Rate how well you fit in with other Asians." Items are rated using a 5-point Likert scale. Internal consistency of the SL-ASIA had a coefficient alpha of .80 in previous studies; Johnson et al. 2002; Ponterotto et al.,1998). In this study, the internal consistency of the items had a coefficient alpha of .88.

Parenting style dimensions. The parenting style dimensions of warmth and psychological control were measured using the Warmth and Involvement subscale and Psychological Control scale from the Parenting Styles and Dimensions Questionnaire (PSDQ; Robinson, Mandleco, Olsen, & Hart, 1995; Olsen et al., 2002, Appendix B). The Warmth and Involvement subscale has 10 items and measures parents' regular use of supportive and responsive behaviors

with their children (e.g., "I am responsive to my child's feelings or needs"). The Psychological Control subscale also has 10 items and measures parents' use of behaviors and practices including personal attack, erratic emotional behavior, guilt induction, and love withdrawal. An example of an item on this measure is, "I tell my child that I get embarrassed when he/she does not meet my expectations." Warmth and Psychological Control items are rated using a 5-point Likert scale (1 = *never* to 5 = *always*).

Behavioral control was measured using the Structure subscale from the Preschool Parenting Measure. This 5-item subscale measures the existence of routines and the degree of organization provided by the mother (e.g., "There is a fixed routine for my child at bedtime that seldom changes"). Items are rated using a 4-point Likert scale (1 = *agree* to 4 = *disagree*) (PPM; Sessa, Avenevoli, Steinberg, and Morris, 2001; Appendix B). The first item of the Structure subscale was removed to improve the internal consistency of this scale from .58 to .65. The parenting style dimensions in this study had coefficient alphas of .85, .69 and .65 for warmth, psychological control and behavioral control respectively.

Parental feeding practices. The Comprehensive Feeding Practices Questionnaire (CFPQ; Musher-Eizenman & Holub, 2007; Appendix C) is a parental self-report questionnaire that measures parents' feeding practices. The Pressure, Restriction for Health (RH) and Restriction for Weight (RW) subscales were used for this study. There are four Pressure items that measure parents' attempts to encourage their children to consume more food (e.g., "If my child

says, 'I'm not hungry,' I try to get him to eat anyway"). There are eight Restriction for Weight items that measure parents' attempts to control their children's food intake for the purpose of decreasing the child's weight (e.g., "I encourage my child to eat less so he/she won't get fat"). The four Restriction for Health items reflect parents' attempts to control their children's food intake with the purpose of limiting unhealthy foods (e.g., "If I did not guide or regulate my child's eating, he/she would eat too much of his/her favorite foods). Items are rated using a 5-point Likert scale (1 = *disagree* to 5 = *agree*). The CFPQ was designed for parents with children aged 2-8 years and has been used in different cultures (Musher-Eizenman et al., 2009). The CFPQ typically has coefficient alphas of .79, .81 and .70 for pressure, restriction for health and restriction for weight, respectively). In this study, the CFPQ had coefficient alphas of .63, .72, and .85, respectively.

Children's eating behavior questionnaire. The Children's Eating Behavior Questionnaire (CEBQ; Wardle et al., 2001, Appendix D) is a parent-report measure designed to assess eating behaviors among children. It was designed to capture individual differences in eating style that are associated with underweight and overweight status. Two subscales were used for this study: Food Responsiveness and Satiety Responsiveness (Wardle et al., 2001). The Food Responsiveness scale is a five-item scale designed to detect overconsumption of food which could be viewed as maladaptive (e.g., ''Given the choice, my child would eat most of the time''). The Food Responsiveness scale was also

developed to capture the child's tendency to eat when prompted by external cues (e.g., ''Even if my child is full up, he/she finds room for his/her favorite food''). In previous research, this subscale had a coefficient alpha of .80. In this study, Food Responsiveness had a Cronbach coefficient alpha of .71. Endorsement of these items is associated with increased adiposity, as well as eating in the absence behaviors in children (Wardle et al., 2001).

The Satiety Responsiveness scale has 9-items which measures the child's satiety sensitivity and ability to cease eating based upon perceived fullness (e.g., "My child gets full before his/her meal is finished). Past research found this scale to have adequate reliability with a coefficient alpha of .74 (Wardle, 2001). Items on this measure are rated using a 5-point Likert scale (1 = *never* to 5 = *always*). In this study, Satiety Responsiveness had a coefficient alpha of .67.

Children's eating in the absence of hunger. The Eating in the Absence of Hunger Questionnaire-Child Version is a measure that assesses children's eating in absence of hunger (EAH-C; Tanofsky-Kraff et al., 2008, Appendix D). Parents were asked to reflect on their perception of their children's behaviors during mealtime. Parents were asked to "Imagine that your child is eating a meal or snack at home, school or restaurant. Imagine that he/she eats enough so that he/she is no longer hungry." Parents were then asked if their children continue to eat based on external cues (e.g., the food taste good or other people are still eating). This measure uses a 5-point Likert scale (1 = *never* to 5 = *always*). Previous research found the External Eating subscale to have acceptable

reliability with a coefficient alpha of .80. For this study, External Eating had internal consistency coefficient alpha of .69.

Analysis Plan

Nominal data are reported as percentiles and continuous data as means with standard deviations. A series of independent-samples *t*-tests were conducted to examine if group differences exist between South Asian and Caucasian parents' feeding practices (pressure, restriction for health, and restriction for weight). Pearson correlations were conducted to examine the relationship between parents' acculturation, parenting style dimensions (warmth, behavioral control, and psychological control) and feeding practices (pressure, restriction for health, restriction for weight). Next, Pearson correlations were also used to test the relationship between parenting style dimensions (warmth, behavioral control, and psychological control) and feeding practices (pressure, restriction for health, restriction for weight). Hierarchical regression analyses were used to explore parenting styles and feeding practices in relation to self-regulation. Specifically, these analyses examined whether feeding practices predicted self-regulation above and beyond parenting style. In addition, a series of regressions were run to examine whether parenting style moderates the relationship between feeding practices and child self-regulation. A p-value of 0.05 was used to test for significance in all analyses.

CHAPTER FOUR
Results

Means and standard deviations for key study variables are presented in Table 2. Preliminary analyses revealed that child age and child BMI percentile were significantly positively correlated with restriction for weight (Table 3). Child age was correlated with acculturation, but child age and child BMI percentile were not related to any other study variables. There were also no child gender differences on key study variables, all *p*'s = n.s. There were also no differences in mothers' and fathers' reports of key study variables, all *p*'s = n.s, so data from mothers and fathers were combined for these analyses.

Comparison of South Asian and Control Group Feeding Practices

The first hypothesis examined whether South Asian mothers endorse more controlling feeding practices than control group mothers. To test if differences exist between these two groups, a series of independent-samples *t*-tests were conducted (Table 4). As anticipated, South Asian mothers reported significantly higher levels of pressuring feeding practices than the control group mothers, $t(56) = 3.11$, $p = .003$. Contrary to expectations, restriction for health and restriction for weight were not significantly different between the two groups, $t(56) = -1.12$, p = n.s and $t(56) = 1.77$, p = n.s., respectively. Additionally correlation between feeding practices for South Asian and control groups were examined (Table 5). Pressure and restriction for health were correlated for South Asian mothers but

were not correlated for the control group mothers.

Acculturation, Parenting Style and Feeding Practices

In order to examine the second hypothesis, that acculturation would be associated with parenting style dimensions and feeding practices, Pearson correlations were conducted (Table 6). It was anticipated that less acculturated parents would use more controlling parenting style dimensions and feeding practices. Contrary to expectations, acculturation was not associated with parenting style dimensions or feeding practices. However, acculturation was associated with external eating.

Parenting Style and Feeding Practices

The third hypothesis concerned the association between parenting style dimensions and feeding practices. To examine these relationships, Pearson correlations were conducted (Table 6). As anticipated, warmth was not associated with feeding practices. Contrary to expectations, behavioral control was not associated with feeding practices. Surprisingly, psychological control was correlated with restriction for health and pressure.

Parenting Style, Feeding Practices, and Children's Self-Regulation

The primary goal of the study was to examine the relationships between parenting style dimensions, feeding practices and self-regulation. Correlations between these variables are presented in Table 6. The hypothesis that controlling feeding practices would be associated with self-regulation was partially confirmed in that certain feeding practices were related to specific aspects of self-regulation.

More specifically, restriction for health was positively correlated with external eating and food responsiveness, but not associated with satiety responsiveness. Restriction for weight was positively correlated with food responsiveness and negatively correlated with satiety responsiveness. Contrary to the hypotheses, pressure was not correlated with external eating, food responsiveness or satiety responsiveness.

Three hierarchical linear regression analyses were conducted to further explore which variables best predicted self-regulation. The three self-regulation variables were the dependent variables which included external eating, food responsiveness, and satiety responsiveness (i.e., self-regulation). For these analyses, parenting style dimensions (warmth, behavioral control, psychological control) were entered in the first step. Parental feeding practices (pressure, restriction for health, restriction for weight) were entered into the second step.

The first regression examined predictors of external eating (Table 7). The first step was significant, $F(3, 46) = 3.41$, $p = .03$, $R^2 = .18$. The second step was also significant, $\Delta F(3, 43) = 2.82$, $p = .05$, $\Delta R^2 = .32$. There were no univariate predictors for parenting style dimensions, however there was a trend for psychological control. Restriction for health was the only significant univariate predictor of external eating.

The next regression examined predictors of food responsiveness (Table 8). The first step was not significant, $F(3, 46) = 4.08$, $p = .03$, $R^2 = .21$. The second step was significant, $\Delta F(6, 43) = 5.03$, $p = .004$, $\Delta R^2 = .21$. Again, there were no

univariate predictors for parenting style dimensions but warmth and psychological control trended towards significance. Restriction for health was the only significant univariate predictor of food responsiveness.

The third hierarchical regression analyses examined predictors of satiety responsiveness (Table 9). The first step was not significant, $F(3, 46) = 1.13$, p = n.s., $R^2 = .07$. The second step was also not significant, $\Delta F(3, 43) = 1.80$, p = n.s., $\Delta R^2 = .10$. There were no significant predictors of satiety responsiveness.

A series of regressions were run to examine whether parenting style moderates the relationship between feeding practices and child self-regulation. However, there were no significant interactions between these variables, likely due to limited power.

CHAPTER FIVE
Conclusion and Recommendations

This study is the first to examine associations between parenting style dimensions, parental feeding practices and children's ability to regulate food intake in a South Asian population. This research is valuable because this is an understudied population which may be at risk for health related consequences related to obesity (Abate & Chandalia, 2001).

Comparison of South Asian and Caucasian Parents' Feeding Practices

Results from this study indicate that South Asian mothers reported using significantly more pressure in feeding than Caucasian mothers, although there were no differences between the two groups for restriction. South Asian mothers' use of more pressure is consistent with previous that found South Asian mothers were significantly more likely to endorse that their child was not allowed to leave food on his/her plate than Caucasian mothers (Hackett and Hackett, 1994), which is a form of pressure.

South Asian mothers' reports of more pressure than Caucasian mothers may be related to several factors. One possible explanation is that it was difficult to match the control group for this study. Participants were matched based on child age, gender, and when possible BMI percentile. However, the South Asian children in this study had lower reported BMI percentiles than the control group. There are several possible reasons for this difference. First, South Asian children

may have lower weight status than Caucasian children on average. However, previous research suggests similar rates of obesity in these two groups (Thorpe et al., 2004). Second, there were a large number of mothers in the South Asian sample who did not report their child's height or weight or who reported heights or weights that were not possible for the child's age. Thus, it is possible that this difference in pressure is based on real differences in the pressuring practices used between these two groups and not just due to child's weight status. Future research should objectively weigh and measure children, instead of relying on self-reported child heights and weights.

There were not differences between South Asian mothers and Caucasian mothers' reports of restriction for health or restriction for weight. This finding was not in line with hypotheses. Past research suggests that restriction is related to parents' concern about child overweight (Musher-Eizenman & Holub, 2007). Thus, the lack of difference seen in restriction could be related to the lower weight status of South Asian children compared to Caucasian children in this study. Perhaps the South Asian mothers are reporting a higher level of control commensurate with their child's weight status, but because of mean differences in weight status, mean differences in restriction between the two groups were not apparent. Unfortunately, due to errors in data collection, this study does not allow us to examine parents' reports of concern regarding their children's weight status, so future research should examine whether concern about overweight differs between these two groups or attempt to more carefully match samples.

Another possible explanation is that South Asian mothers may have healthier home environments, which may make them less likely to report restriction for health because the children do not have access to unhealthy foods in the home. In a national study of Asian Indians in the US, 50% were vegetarian and 30% used dietary herbal supplements (Misra, Balagupal, Klatt & Geraghty, 2010). Traditional South Asian dishes are relatively healthy and typically consist of rice, legumes, and/or vegetables; whereas, "American" diets tend to include more processed foods, sugary foods and soft drinks (Raj, Ganganna, & Bowering, 1999).

Last, there was a trend for differences in restriction for weight. However, due to a small sample size this difference may not have reached significance due to low power. Future research should examine these relationships with a larger sample size.

Pressure and restriction for health were correlated for the South Asian group but not for the control group. South Asian parents endorsed these two feeding practices together more than the control group. Parents typically use controlling feeding practices (pressure to eat more or restriction to eat less) out of concern for their child's weight status (Musher-Eizenman & Holub, 2007). South Asian parents' use of two competing controlling feeding practices may indicate that they are using more overall control in feeding their children.

Acculturation, Parenting Style and Feeding Practices

Contrary to expectations, in this study acculturation was not associated with parenting style dimensions or feeding practices. In this sample there was a wide range of scores on the acculturation measure so it does not appear that restricted range accounts for the null findings. It is a possibility that South Asian parents in this sample have different characteristics from South Asians in South Asia and that in the U.S., acculturation does not influence parenting style or feeding practices. Future research may want to examine if differences exist between South Asian Americans and those living in South Asia. Another possibility is that there are no group differences in the parenting styles and feeding practices between high and low acculturated parents, which may also explain the lack of findings in acculturation. However, anecdotal evidence suggests that there may be differences that these standardized measures were not sensitive enough to detect.

Although acculturation was not related to parenting style or feeding practices, it was related to parents' reports of children's external eating. When parents reported that they were more acculturated (i.e. Westernized), they reported higher external eating (eating due to external cues) for the child. This finding is consistent with previous research that indicates acculturation is associated with risk factors for obesity (Lauderdale & Rathouz, 2000; Unger, 2004).

Parenting Style and Feeding Practices

This study found that the parenting style dimension of psychological control was associated with restriction for health and pressuring feeding practices. This result was contrary to what was hypothesized; however, parenting style can encompass practices (Darling & Steinberg, 1999). For example, psychological control may manifest in different domains, such as feeding. Parents that are high in psychological control may invalidate their child's abilities across multiple areas. In a feeding context, this may be seen by parents disregarding their children's own perceptions of their hunger and fullness. It is surprising that psychological control was related to both restriction for health and pressure because these are two very different controlling feeding practices that are typically associated with very different concerns on the part of the parent. Pressure is usually associated with concern for underweight status, while parents may use restriction for health out of concern that the child may gain weight.

Against expectations, behavioral control was not associated with controlling feeding practices. Warmth was also not associated with controlling feeding practices. Warmth and behavioral control are considered positive parenting styles dimensions that are associated with positive outcomes across cultures (Wang et al., 2007). Warmth offers the child support and encouragement and behavioral control provides structure and discipline (Bean et al., 2006). These parenting style dimensions do not entail intrusiveness, pressure, or domination like psychological control does (Darling & Steinberg, 1993).

Because warmth and behavioral control do not encompass excessive control, this may explain the lack of correlation between these variables and controlling feeding practices. Additionally, parents who are high in behavioral control and warmth are generally sensitive to their child's abilities. Therefore, these parents may only use controlling feeding practices if children need help in this domain.

Parenting Style, Feeding Practices, and Children's Self-Regulation

Results from this study partially support our hypothesis that controlling feeding practices are related to children's self-regulation ability. This study also supports previous findings that parenting practices are better predictors of outcomes than parenting styles (Costanzo & Woody, 1985). Additionally, these findings indicate that although correlated, restriction for health and restriction for weight are two separate constructs. Some previous research has not separated these variables (Birch et al., 2001), but examining these variables independently, as was done in this study, may allow for better understanding of the nature of restriction and related self-regulation outcomes. The three self-regulation variables examined in this study were external eating, food responsiveness, and satiety responsiveness.

External eating refers to children eating more in response to external factors (such as the sight, smell, or taste of food, or others eating). External eating was correlated with restriction for health and psychological control. Restriction for health predicted external eating even after controlling for psychological control. Parents were more likely to endorse restricting access to

unhealthy foods when they believed that their child ate more in response to external cues (external eating). Past research suggests that parents restrict for health due to concern of their child eating unhealthy foods (Musher-Eizenman & Holub, 2007). However, restriction has consistently been associated with externally motivated eating and problems in self-regulation (Fisher & Birch, 1999; Musher-Eizenman & Holub, 2006). Although parents are well-intentioned, use of restriction in feeding may have the unintended consequence of impairing children's ability to attend to satiety cues. Lowered self-regulation ability is, in turn associated with child adiposity (Birch & Davidson, 2001).

The relationship between parenting style, feeding practices and food responsiveness was also examined. Food responsiveness refers to levels of appetite that may be maladaptive and the tendency to eat in response to external cues (Wardle, 2001). High levels of food responsiveness are associated with higher adiposity (Carnell & Wardle, 2007). Restriction for health, restriction for weight and psychological control were correlated with food responsiveness but the best predictor was restriction for health. Thus, parents were more likely to restrict access to unhealthy foods when they believed that their child was overly responsive to food. Although parents have the child's best interest in mind, use of restriction in feeding may unintentionally impair the child's ability to attend to satiety cues which can have consequences for overweight status (Birch & Davidson, 2001).

Satiety responsiveness refers to the child's ability to attend to fullness

cues. Restriction for weight and child BMI percentile were associated with satiety responsiveness. It is logical that as reported child weight status increases, parents' would report that their child has less of an ability to attend to fullness cues. These findings are based on parents' self-report of their child's behavior, which may be biased. Although parents can observe and talk to their children about their perceived fullness, they cannot fully know what their child is experiencing with respect to satiety or hunger.

As mentioned previously, in this sample, children had relatively lower BMI percentiles so parents may not be as concerned about restricting foods weight reasons as they are for health reasons. No interaction effects were found between parenting style dimensions and feeding practices on self-regulation. The small sample size may have been too small to show this effect.

Limitations and Future Recommendations

There are several limitations of this study. First, this data was cross-sectional and correlational; therefore, causal relationships cannot be inferred. For example, it is possible that parents use more controlling feeding practices because their children have problems self-regulating and not the other way around. Additionally, it is possible that the associations between parenting styles, feeding practices and self-regulation are being influenced by other variables, such as parent's concerns about their child's weight status or parent's perception of their child's weight status (Francis, Hofer, Birch, 2001; Musher-Eizenman, et al., 2009). Since causal inferences cannot be made from studies like this one, a

longitudinal and or experimental investigation is warranted to examine the exact mechanisms underlying parenting style dimensions, feeding behaviors and child weight outcomes.

Secondly, the data collected for this study was based on parents' self-reports of their own behaviors and their children's behavior. Self-report measures are a practical way to approach cross-sectional research and using a survey method was the best choice for this project given the time and financial constraints. Still this methodology carries with it inherent bias. There was monomethod bias because only one format (survey) and informant (parent-report), was used for this study. Parents report of their own and their child's behaviors may reflect their perceptions that may or may not be accurate. Future research should examine feeding practices using an observational task. Additionally, there may have been some social desirability bias in responding if the participant did not want to be perceived as controlling. Another problem with parent self-report is that parents may unintentionally underestimate or overestimate their child's actual behaviors because they are usually not with the child the whole day. Children are exposed to many different food environments throughout the day (i.e. childcare, school, friends' houses). One study found that 40% of the food that children consume during a weekday occurs while the child is at school (Wolfe & Campbell, 1993). Thus, parents may not always be aware of their children's eating and regulatory behaviors in each of these different settings. Parents may think that they know all about their child's eating behaviors, but they

may not have a full understanding of their child's eating behaviors in different context outside the home.

Future research on this topic may consider using other forms of data collection, such as structured interviews to collect qualitative data or child self-reports to gain the child's perspective. Observational studies have also been conducted examining parent-child interactions during a meal (Orrell-Valente, Hill, Breechwood, Pettite, & Bates, 2007). Another possible observational study might include assessing self-regulation by monitoring the child during an externally motivated eating task (Musher-Eizenman & Holub, 2006).

The subjects for this study are from a very specific population. The participants in this study were generally well-educated and had high incomes; therefore, results may not be generalizable to individuals with less education or lower socioeconomic status. Recruitment of participants was challenging; however, recruiting South Asian from a lower socioeconomic status may be particularly challenging due to possible mistrust of institutions, language barriers, and transportation issues.

One of the greatest limitations of this study is that it had a relatively small sample size and recruitment of participants proved challenging. Having a small sample size decreases the power of the statistical tests that were used, which decreases the likelihood of having statistically significant findings. Additionally, in this study some of the measures (behavioral control, pressure, satiety responsiveness) had low alpha levels, although these scales have been previously

established with good internal consistency in past research. It may be that the small sample size contributed to low internal consistency or it is possible that these scales may measure something different in this group. The acculturation measure did have good internal consistency but was unrelated to parenting style dimensions or feeding practices. This may be because this instrument may not have been the best measure to assess acculturation. Future studies may want to look at perhaps use a collectivism scale to assess the role that culture may play in parenting styles and/or feeding practices.

Implications

This research found that South Asian parents' use of certain controlling feeding practices was associated with problems in children's self-regulation ability. Parents may use controlling feeding practices out of concern that the child is overweight, but use of restriction, may have the unintended consequence of impairing the child's ability to attend to their own satiety cues (Fisher & Birch, 1999). Restricting access to foods may also create a "forbidden food" effect and make the food more desirable to the child so that when they do get access to it they eat more of it (Savage, Fisher, & Birch, 2007). Healthcare professionals may use these findings to help educate South Asian parents with young children about healthy feeding practices. Health professions can teach parents about the associations between controlling feeding practices and self-regulation and the benefits of using non-controlling feeding practices such as modeling healthy eating behaviors, teaching about nutrition, and encouraging the child to taste new

and healthy foods (Lee & Birch, 2002; Wardle et al., 2003).

Conclusion

Childhood obesity is an issue of great concern in the U.S. Although these findings were similar to previous research of feeding practices and self-regulation outcomes for children, this is the first study to examine these relationships with South Asian parents. This research is particularly important for this group as South Asians are at greater risk for weight-related health problems (Abate & Chandalia, 2001; 2007). Hopefully this research sheds light on a growing segment of the population for which there is very limited data.

Table 1

Comparison of Gender, Education and Income for South Asian Mothers and Control Group Mothers

	South Asian		Control	
Characteristic	N	%	N	%
Boys	20	69	20	69
Girls	9	31	9	31
Some High School	--	--	1	2
High School/GED	--	--	1	2
Some College	1	3	9	31
College Graduate	5	17	13	45
Some Graduate	2	7	2	7
Masters Degree	15	52	2	7
Doctorate/Professional	6	21	3	10
Under $15,000	2	7	1	3
$15,000-$35,000	2	7	3	10
$35,000-$55,000	1	4	6	21
$55,000-$75,000	3	11	6	21
$75,000-$95,000	3	11	5	17
> $95,000	16	59	6	28

Table 2

Comparison of Child Age, BMI percentile and Parent BMI for South Asian Mothers and Control Group Mothers

Characteristic	South Asian	Control
Child Age	6.35(1.44)	6.35(1.44)
BMI percentile	51.19(35.73)	70.6(21.94)
Parent BMI	23.15(3.11)	25.49(25.42)

Table 3

Means and Standard Deviations for Acculturation, Parenting Style Dimensions, Feeding Practices and Self-Regulation

	Sample		
Variable	*N*	M	SD
Acculturation	50	2.49	.55
Warmth	54	4.49	.43
Behavioral Control	53	2.97	.57
Psychological Control	54	2.04	.54
Restriction for Health	50	3.16	1.01
Restriction for Weight	50	2.58	.84
Pressure	50	3.16	.82
External Eating	51	2.05	.67
Food Responsiveness	52	2.09	.69
Satiety Responsiveness	52	3.32	.51

Table 4

Correlations between Child Age, BMI Percentile, and Key Study Variables

Measure	Age	BMI percentile
Acculturation	-.33*	-.08
Warmth	.12	.16
Behavioral Control	-.04	-.19
Psychological Control	.17	.09
Restriction for Health	.03	.09
Restriction for Weight	.32*	.38*
Pressure	-.14	-.21
External Eating	-.08	.02
Food Responsiveness	.12	.04
Satiety Responsiveness	-.17	-.36

Note. * $p < .05$.

Table 5

Comparison of Feeding Practices for South Asian Mothers and Control

	South Asian		Control	
Measure	M	SD	M	SD
Pressure	3.15	.82	2.48*	.82
Restriction for Health	3.14	1.02	3.46	1.14
Restriction for Weight	2.44	.84	2.09†	.68

Note. South Asian $N = 29$. Control $N = 29$. * $p < .05$. † $p = .08$.

Table 6

Correlation Matrix of Feeding Practices for South Asian Mothers and Control Group Mothers

	1	2	3
1. Pressure	-	.10	.01
2. Restriction for Health	.36†	-	.55**
3. Restriction for Weight	-.22	.29	-

Note. South Asian $N = 29$. Control $N = 29$. The lower diagonal represents South Asian parents. The upper diagonal represents the control group. ** $p < .01$. $^{\dagger}p = .06$.

Table 7

Summary of Intercorrelations between Acculturation, Parenting Style Dimensions, Feeding Practices and Self-Regulation

Variable	1	2	3	4	5	6	7	8	9	10
1.Acculturation	-									
2. Warmth	-.09	-								
3. Behavioral Control	.08	.08	-							
4. Psychological Control	-.01	-.14	-.17	-						
5. Restriction for Health	.04	-.16	-.03	.41**	-					
6. Restriction for Weight	-.25	.05	-.04	.24	.47**	-				
7. Pressure	-.20	-.19	.07	.30*	.43**	.03	-			
8. External Eating	.39**	-.23	-.25	.31*	.43**	.21	.03	-		
9. Food Responsiveness	.08	-.26	-.25	.31*	.55**	.32*	.19	.48**	-	
10.Satiety Responsiveness	.03	-.17	-.20	.-.20	-.19	-.29*	.11	-.09	-.07	-

Note. * $p < .05$. ** $p < .01$.

Table 8

Summary of Hierarchical Regression Analysis for Parenting Styles and Feeding Practices Predicting Children's External Eating

Variable	*B*	*SE B*	ß
Step 1:			
Warmth	-.32	.22	-.20
Behavioral Control	-.20	.15	-.18
Psychological Control	.33	.17	.27†
Step 2:			
Restriction for Health	.28	.11	.43*
Restriction for Weight	-.02	.12	-.02
Pressure	-.19	.12	-.23

Note. * $p < .05$. † $p = .05$.

Table 9

Summary of Hierarchical Regression Analysis for Parenting Styles and Feeding Practices Predicting Children's Food Responsiveness

Variable	*B*	*SE B*	ß
Step 1:			
Warmth	-.46	.23	-.26†
Behavioral Control	-.24	.17	-.20††
Psychological Control	.32	.17	.25
Step 2:			
Restriction for Health	.32	.11	.46*
Restriction for Weight	.08	.12	.10
Pressure	-.05	.12	-.06

Note. * $p < .05$. † $p < .07$.

Table 10

Summary of Hierarchical Regression Analysis for Parenting Styles and Feeding Practices Predicting Children's Satiety Responsiveness

Variable	*B*	*SE B*	ß
Step 1:			
Warmth	-.15	.18	-.12
Behavioral Control	-.18	.12	-.21
Psychological Control	-.15	.13	-.16
Step 2:			
Restriction for Health	-.08	.09	-.16
Restriction for Weight	-.12	.10	-.20
Pressure	.13	.10	.21

Note. * $p < .05$.

APPENDIX A
Acculturation Items

Suinn-Lew Asian Self Identity Acculturation Scale (SL-ASIA; Suinn, Koo, Ahuna, 1995)

The questions which follow are for the purpose of collecting information about your historical background, as well as more recent behaviors that may be related to your cultural identity. Choose the one answer which best describes you.

1. What language can you speak?
a. South Asian language only
b. Mostly South Asian language, some English
c. South Asian language and English about equally well (bilingual)
d. Mostly English, some South Asian language
e. Only English

2. What language do you prefer?
a. South Asian language only
b. Mostly South Asian language, some English
c. South Asian language and English about equally well (bilingual)
d. Mostly English, some South Asian language
e. Only English

3. How do you identify yourself?
a. South Asian
b. Asian
c. Asian-American
d. Indian-American, Sri Lankan-American, Bangladeshi-American, etc.
e. American

4. Which identification does (did) your mother use?
a. South Asian
b. Asian
c. Asian-American
d. Indian-American, Sri Lankan-American, Bangladeshi-American, etc.
e. American

5. Which identification does (did) your father use?
a. South Asian
b. Asian
c. Asian-American
d. Indian-American, Sri Lankan-American, Bangladeshi-American, etc.
e. American

6. What was the ethnic origin of the friends and peers you had, as a child up to age 6?
a. Almost exclusively Asians, South Asian-Americans, South Asians
b. Mostly Asians, South Asian-Americans, South Asians
c. About equally South Asian groups and Anglo groups
d. Mostly Anglos, Blacks, Hispanics, or other non-South Asian ethnic groups
e. Almost exclusively Anglos, Blacks, Hispanics, or other non-South Asian ethnic groups

7. What was the ethnic origin of the friends and peers you had, as a child from 6 to 18?
a. Almost exclusively Asians, South Asian-Americans, South Asians
b. Mostly Asians, South Asian-Americans, South Asians
c. About equally South Asian groups and Anglo groups
d. Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
e. Almost exclusively Anglos, Blacks, Hispanics, or other non-South Asian ethnic groups

8. Whom do you now associate with in the community?
a. Almost exclusively Asians, South Asian-Americans, South Asians
b. Mostly Asians, South Asian-Americans, South Asians
c. About equally South Asian groups and Anglo groups
d. Mostly Anglos, Blacks, Hispanics, or other non-South Asian ethnic groups
e. Almost exclusively Anglos, Blacks, Hispanics, or other non-South Asian ethnic groups

9. If you could pick, whom would you prefer to associate with in the community?
a. Almost exclusively Asians, South Asian-Americans, South Asians
b. Mostly Asians, South Asian-Americans, South Asians
c. About equally Asian groups and Anglo groups
d. Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
e. Almost exclusively Anglos, Blacks, Hispanics, or other non-South Asian ethnic groups

10. What is your music preference?
a. Only South Asian music (Indian, Sri Lankan, Bengali…etc.)
b. Mostly South Asian
c. Equally South Asian and English
d. Mostly English
e. English only

11. What is your movie preference?
a. South Asian-language movies only
b. South Asian-language movies mostly
c. Equally South Asian-language/English-language movies
d. Mostly English-language movies only
e. English-language movies only

12. What generation are you? (circle the generation that best applies to you:)
a. 1st Generation = I was born in South Asia or country other than U.S.
b. 2nd Generation = I was born in U.S., either parent was born in South Asia or country other than U.S.
c. 3rd Generation = I was born in U.S., both parents were born in U.S, and all grandparents born in South Asia or country
other than U.S.
d. 4th Generation = I was born in U.S., both parents were born in U.S, and at least one grandparent born in South Asia or country other than U.S. and one grandparent born in U.S.
e. 5th Generation = I was born in U.S., both parents were born in U.S., and all grandparents also born in U.S.
f. Don't know what generation best fits since I lack some information.

13. Where were you raised?
a. In South Asia only
b. Mostly in South Asia, some in U.S.
c. Equally in South Asia and U.S.
d. Mostly in U.S., some in South Asia
e. In U.S. only

14. What contact have you had with South Asia?
a. Raised one year or more in South Asia
b. Lived for less than one year in South Asia
c. Occasional visits to South Asia
d. Occasional communications (letters, phone calls, etc.) with people in South Asia
e. No exposure or communications with people in South Asia

15. What is your food preference at home?
a. Exclusively South Asian food
b. Mostly South Asian food, some American
c. About equally South Asian and American
d. Mostly American food
e. Exclusively American food

16. What is your food preference in restaurants?
a. Exclusively South Asian food
b. Mostly South Asian food, some American
c. About equally South Asian and American
d. Mostly American food
e. Exclusively American food

17. Do you
a. Read only a South Asian language?
b. Read a South Asian language better than English?
c. Read both a South Asian language and English equally well?
d. Read English better than a South Asian language?
e. Read only English?

18. Do you
a. Write only in a South Asian language?
b. Write in a South Asian language better than English?
c. Write both in a South Asian language and English equally well?
d. Write English better than a South Asian language?
e. Write only English?

19. If you consider yourself a member of the South Asian group (South Asian, Asian, Asian-American,
Indian-American, etc., whatever term you prefer), how much pride do you have in this group?
a. Extremely proud
b. Moderately proud
c. Little pride
d. No pride but do not feel negative toward group
e. No pride but do feel negative toward group

20. How would you rate yourself?
a. Very South Asian
b. Mostly South Asian
c. Bicultural
d. Mostly Westernized
e. Very Westernized
21. Do you participate in South Asian occasions, holidays, traditions, etc.?
a. Nearly all
b. Most of them
c. Some of them
d. A few of them
e. None at all

Appendix B
Parenting Style Dimension Items

Parenting Style Dimensions Questionnaire (PSDQ; Robinson, Mandleco, Olsen, Hart, 1995 pg 823; Olsen et al., 2002 pg 248)

Warmth Items

(1 = Never, 2 = Once in While 3 = About Half the Time, 4 = Very Often, 5 = Always)

I know the names of my child's friends.
I am aware of problems or concerns about my child in school.
I give praise when my child is good.
I give comfort and understanding when my child is upset.
I express affection by hugging, kissing and holding my child.
I show sympathy when my child is hurt or frustrated.
I tell my child I appreciate what he/she tries or accomplishes.
I am responsive to my child's feelings or needs.
I encourage my child to talk about their troubles.
I have warm intimate times together with my child, I apologize to my child when I make a mistake in parenting.

Psychological Control Items

I bring up my child's past mistakes when criticizing him/her.
I tell my child that his/her behavior was dumb or stupid.
I show impatience with my child.
I don't like to be bothered by my child.
I change my mood when with my child.
I act disappointed when my child misbehaves.
I tell my child that I get embarrassed when he/she does not meet my expectations.
I tell my child that he/she is not as good as other children.
If my child hurts my feelings, I stop talking to my child until he/she pleases me again.
I am less friendly with my child when my child does not see things my same way.

Preschool Parenting Measure (PPM; Sessa, Avenevoli, Steinberg, and Morris, 2001 pg 60)

Behavioral Control Items

(1=strongly agree 2=somewhat agree 3= somewhat disagree 4=strongly disagree)

There is a set schedule in my house for which day of the week we do major shopping, household cleaning, yard work, etc.
I "play it by ear" with my child rather than keeping to any schedule or routine
On week nights we eat dinner within 10-15 minutes of the same time every night
There is a fixed routine for my child at bedtime that seldom changes
In my child's room, each thing has its place and it's put back there after use.

APPENDIX C
Feeding Practices Items

Comprehensive Feeding Practices Questionnaire (CFPQ; Musher-Eizenman & Holub, 2007)

(1 = Disagree, 2 = Slightly disagree, 3 = Neutral, 4 = Slightly Agree, 5 = Agree)

Pressure

My child should always eat all of the food on his/her plate.
If my child says, "I'm not hungry," I try to get him/her to eat anyway.
If my child eats only a small helping, I try to get him/her to eat more.
When he/she says he/she is finished eating, I try to get my child to eat one more (two more, etc.) bites of food.

Restriction for Weight

I have to be sure that my child does not eat too many high-fat foods.
I encourage my child to eat less so he/she won't get fat.
I give my child small helpings at meals to control his/her weight.
If my child eats more than usual at one meal, I try to restrict his/her eating at the next meal.
I restrict the food my child eats that might make him/her fat.
There are certain foods my child shouldn't eat because they will make him/her fat.
I don't allow my child to eat between meals because I don't want him/her to get fat.
I often put my child on a diet to control his/her weight.

Restriction for Health

If I did not guide or regulate my child's eating he/she would eat too much of his/her favorite foods.
If I did not guide or regulate my child's eating, he/she would eat too many junk foods.
I have to be sure that my child does not eat too much of his/her foods.
I have to be sure that my child does not eat too many sweets (candy, ice cream, cake, or pastries).

APPENDIX D
Child Self-Regulation Items

Child Eating Behavioral Questionnaire (CEBQ; Wardle, 2001 pg 967)

Food Responsiveness

(1 = Never , 2 = Seldom, 3 = Sometimes, 4 = Often, 5 = Always)

__My child's always asking for food.
__If given a choice, my child would always have food in his/her mouth.
__Given the choice my child would eat most of the time.
__If allowed to, my child would eat too much.
__Even if my child is full, he/she finds room to eat his/her favorite food.

Satiety Responsiveness

(1 = Never , 2 = Seldom, 3 = Sometimes, 4 = Often, 5 = Always)

__My child gets full up easily.
__My child has a big appetite.
__My child leaves food on his/her plate at the end of a meal.
__My child gets full before his/her meal is finished.
__My child cannot eat a meal if s/he has had a snack just before.
__My child eats slowly.
__My child eats more and more slowly during the course of a meal.

Child Eating in the Absence of Hunger

Eating in the Absence of Hunger Scale-Child (EAH-C; Tanofsky-Kraff et. al, 2008, pg 150)

External Eating

(1=Never, 2=Almost Never, 3=Sometimes 4=Almost Always, 5=Always)

Imagine that your child is eating a meal or snack at home, school or restaurant. Imagine that he/she eats enough so that he/she is no longer hungry. In this situation how often does your child continue eating because:
__Food looks, tastes, or smells so good
__Others are still eating
In this situation how often does your child start eating because:
__Food looks, tastes, or smells so good
__Others are still eating

APPENDIX E
Consent Form
University of Texas at Dallas Consent to Participate in Research

Title: The South Asian Families and Food Study

Investigators:		**Contact Number**
Leilani K. Hinton, B.A.	:	972-883-6073
Shayla C. Holub, Ph.D.	:	972-883-4473

Purpose: The purpose of this study is to examine South Asian parents' parenting style and feeding practices.

Description of Project: Parents who give permission to participate in this study will be asked to fill out questionnaires.

Number of Participants: 50 participants will be recruited for this study.

Possible Risks and Benefits: There is minimal risk associated with responding to questionnaires and participants may take a break at any time. Participation in this study may help us learn more about these important topics.

Compensation for Participation: Participants that complete the study will be given the option to receive a $50 gift certificate. If the participant is a UTD student, they can choose between research exposure credit or receiving a $50 gift certificate.

Voluntary Participation: All individuals have the right to agree or refuse to participate in this study at any time. Refusal or withdrawal of participation will not involve any penalty or loss of benefits to which non-participants are entitled.

Records of Participation in this Research:
All of the information participants provide to investigators as part of this research will be protected and held in confidence within the limits of the law and institutional regulation. Every possible effort will be made to preserve confidentiality regarding this data. Consent forms and surveys will be stored separately. Data will be securely locked and personal information removed. Data from this study will be reported as group data, and findings will not be based on individual responses.

Information Available to Others:
Members and associated staff of the Institutional Review Board (IRB) of the University of Texas at Dallas may review the records of your participation in this

research. An IRB is a group of people who are responsible for assuring the community that the rights of participants in research are respected. A representative of the UTD IRB may contact you to gather information about your participation in this research. If you wish, you may refuse to answer questions the representative of the IRB may ask.

Publications Associated with this Research: The results of this research may appear in publications but individual participants will not be identified.

Contact People:
Participants who want more information about this research may contact Dr. Holub (972-883-4473). Participants who want more information about their rights as a participant may contact: Sanaz Okhovat, Director of Research Compliance, 972-883-4579 UTD Office of Vice President for Research Additional information is available upon request.

Signatures

A participant's signature indicates that they have read, or listened to, the information provided above and that they have received answers to their questions. The signature also indicates that they have freely decided to participate in this research.

_____

Participant's Name (printed)

_____ _____

Participant's Signature Date

APPENDIX F
Approval Letters

THE UNIVERSITY OF TEXAS AT DALLAS
MP15 800 WEST CAMPBELL ROAD RICHARDSON, TEXAS 75080-3021
(972) 883-4579 FAX (972) 883-2310
OFFICE OF RESEARCH COMPLIANCE

Date: **27 April 2010**

To: **Leilani K. Hinton, B.A.**
Shayla Holub, Ph.D.
Behavioral and Brain Sciences

From: **Sanaz Okhovat**
Director, Office of Research Compliance

Re: **Approval of IRB File Number: 10-20**
A Cross-Cultural Examination of Parenting Style and Feeding Practices

This letter is notification of Approval of the research project IRB File 10-20. IRB approval of this research begins as of **27 April 2010** and ends on **26 April 2011.**

The IRB requires that you report as soon as possible any unexpected adverse events (including non-serious and serious events) that occur during the study. If the research is expected to continue beyond 12 months, you must request Continuing Review and re-approval of the project least 6 weeks prior to the date of expiration date noted above.

If you plan to change the research project (number of participants, title, procedure, payment, consent form, etc.), you must submit a request detailing the proposed changes and receive IRB approval before the changes are implemented except when prompt changes are necessary to eliminate apparent and immediate hazards to the participants.

The IRB requires that all personnel who interact with research participants or who have access to research data be trained in research ethics and practices concerned with the protection of the welfare and rights of research participants. These ethical principles are outlined in the Belmont Report.

All investigators and key personnel involved with this protocol must have documented training with this office. The training can be found at: http://www.utdallas.edu/research/compliance/irb/training.html

If you have any questions related to this approval, you may contact me by phone at 972-883-4579 or by email at sanaz.okhovat@utdallas.edu.

STATUS SHEET

FOR DISTRIBUTION OF NON – SCHOOL MATERIALS
2010-2011

Richardson Independent School District
Administration Annex, 400 S Greenville Ave., Richardson, TX 75081

Processed Date: 10/13/2010

ORGANIZATION: UT Dallas

CONTACT NAME: Leilani Hinton
PHONE NUMBER: 972-998-4447
FAX NUMBER: 214-905-1585
EMAIL:

ACTIVITY / INFORMATION: Recruit parents for research survey

Distribution to: All Students

Schools: Forestridge, Jess Harben, MST Magnet, Dartmouth, Arapaho Classical Magnet, Aikin

DECISION:

APPROVED: Yes- Distribution

DENIED: _____ **REASON:**

NOTE: ***RISD's approval of this distribution request does not signal the sponsorship or endorsement of the non-school activity or event.***

- The request to distribute non-school materials has been conditionally approved subject to your compliance with RISD's procedures stated on the Request Form.
- A requestor is responsible for delivering approved materials to the campus or campuses for distribution. Nonconforming materials will not be distributed.
- Each campus reserves the right to determine the content of its weekly folders. Distribution of non-school materials may be delayed if the principal determines that a particular weeks' folder is unreasonably large.

Thank you for your interest in Richardson Independent School District.

Harry Everett
Coordinating Director
Student Services

IRB 10-20

PLANO
Independent School District

August 25, 2010

UTD Office of Research Compliance
Attn: Nicole Kelley
800 West Campbell Rd, MP 15
Richardson, TX 75080

Dear Ms. Kelley,

The department of Assessment and Accountability at Plano ISD is aware that Leilani Hinton is conducting a study on parenting styles and feeding practices within the South Asian community. Parents recruited for this study will be asked to participate in the study by completing a survey packet. The Plano Independent School District is allowing Ms. Hinton to recruit from schools within the district.

For additional information or questions please contact, Dr. Paul Dabbs, Assistant Director of Assessment and Accountability at 469-752-8977 or via email, paul.dabbs@pisd.edu .

Thank you,

Paul Dabbs

Dr. Paul Dabbs
Assistant Director of
Assessment and Accountability
Plano Independent School District
2700 W. 15th Street
Plano, Texas 75075

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