

COMPREHENSIVE FEEDING PRACTICES
QUESTIONNAIRE: A VALIDATION STUDY IN A
LOWER SOCIOECONOMIC STATUS COMMUNITY

By

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CHAPTER I

INTRODUCTION

Chronic diseases such as heart disease, cancer, and diabetes are the leading causes of death and disability in the United States. These diseases account for 7 of every 10 deaths and affect the quality of life of 90 million Americans (Centers for Disease Control, 2006). Although chronic diseases are among the most common and costly health problems, they are also among the most preventable. The prevalence of chronic diseases among lower socioeconomic status individuals is growing exponentially. The general health of the population is failing; every year, there are more cases of cardiovascular disease (CVD), cancer, and especially diabetes.

Obesity is a predisposing factor for a majority of the chronic diseases mentioned previously. The obesity epidemic in America is growing exponentially, specifically among individuals between the ages of 12 and 19 (CDC, 2005). Researchers are finding that this age group is already presenting several factors that lead to the aforementioned chronic diseases (Whitaker, Wright, Pepe, Seidel, & Dietz, 1997; Dietz, 1998; Reilly, 2005). There are also severe psychological ramifications of obesity that can affect daily living, such as psychological distress, which may in turn lead to stress, anxiety, and high-risk behaviors (Berry, Naylor, & Wharf-Higgins, 2005; Pinhas-Hamiel, et al., 2006).

One behavioral factor that is closely tied to obesity is an increase in sedentary activities (Dennison, Erb, & Jenkins, 2002; Biddle, Gorley, & Stensel, 2004; Marshall, Biddle, Gorley, Cameron, & Murdey, 2004). One theory suggests that among 12 to 17-year-olds, the odds of developing obesity increases for every additional hour of sedentary activity. Typically, along with the increase in sedentary activity, there is also an increase in consumption of calorically dense food (Domel, Baronowski, Davis, Leonard, Riley, & Baronowski, 1994; Ackard, Neumark-Sztainer, Story, & Perry, 2003), which further raises the risk for obesity.

Obesity and chronic diseases affect every ethnicity and culture; however, no group has been affected by these conditions more so than lower socioeconomic status individuals (Neumark-Sztainer, Wall, Story, & Fulkerson, 2004). Chronic diseases are extremely preventable and can usually be classified as lifestyle or behavioral diseases. Because chronic diseases are arguably lifestyle and behavioral diseases, one must examine how behaviors are generally formed. The consensus is that behaviors are formed at a very early age and are molded and modeled by parents and caregivers of children and adolescents. The parenting styles and practices employed on adolescents, specifically feeding habits, have a major impact on their lives and can also increase their risks for developing obesity (Blissett & Haycraft, 2007).

There are several constructs studied in parental practices and styles regarding adolescent feeding, and more specifically in this research. Controlling a child's food intake and behavior is the first construct evaluated and usually one of the first employed (Francis, Hofer, & Birch, 2001). The second and perhaps most studied construct is restriction. Restriction is simply restricting an adolescent's intake of the type and amount

of food (Birch et al., 2001). Pressuring a child to eat, the third construct, is a practice that usually only appears at meal times and is an indicator of a parent's attempts to override the child's internal cues of hunger (Birch, 1987). The fourth and fifth constructs investigated in this study involve using food as a reward and emotional regulation. Temple and colleagues (2008) found that overweight children thought food was more reinforcing, and they consumed more calories than their smaller peers.

However, the sixth and seventh constructs, are highly important and are thus discussed in this study. Parental involvement and modeling, both constructs seem very similar, yet they are very different. Parental involvement is one of the best predictors of short and long-term weight regulation (Epstein, 1996; Golan, 2006; Fulkerson, Strauss, Neumark-Sztainer, Story, & Boutelle, 2007; Schuetzmann, Richter-Appelt, Schulte-Markwort, & Schimmelmann, 2008) and is the context to which the parent is occupied in the child's feeding. One thought is that parental involvement directly relates to socioeconomic status (SES). Modeling explicitly refers to observational learning (Bandura, 1965). Direct parental modeling of unhealthy eating behaviors is associated with development of excess body weight in children.

While parental feeding constructs, chronic diseases, and socioeconomic status appear to fit together, little research has been conducted to define a relationship between parental feeding practices and lower SES parents. There have been several questionnaires that look at some of the constructs, but not all of them. The Comprehensive Feeding Practices Questionnaire (CFPQ) (Musher-Eizenman & Holub, 2007) takes into account the constructs and parental practices and styles.

Statement of the Problem

The Comprehensive Feeding Practices Questionnaire (CFPQ) (Musher-Eizenman & Holub, 2007) was designed using Caucasian mothers living in a higher than average socioeconomic status bracket and an urban community. This study will attempt to assess validity of the questionnaire in a lower socioeconomic status bracket.

Purpose of the Study

One of the most significant problems in the United States is that obesity is now a serious threat to children. Parental feeding is not a new area of study; however, the majority of the previous investigations have focused on middle and upper class Caucasian subjects as opposed to individuals of mid-to-low socio-economic status (SES) in urban communities. The purpose of this study is to determine whether the Comprehensive Feeding Practices Questionnaire (Musher-Eizenman & Holub, 2007) in its current form is valid to use with mid-to-low SES parents who are also living in a rural community.

The Comprehensive Feeding Practices Questionnaire has documented validity in a mid to high socioeconomic status, urban, well-educated, maternal population; however, it has not been used in a more rural, blue-collar community. That said, the purpose of this study is to assess the construct validity of this questionnaire in this new population. Results of this study may be useful in both theory and practice of childhood obesity prevention.

Limitations to the Study

The research may be limited by the following:

1. The Comprehensive Feeding Practices Questionnaire is a self-report survey.
2. Sample was one of convenience and not random assignment.

3. In the original research, the quality of the validation process was not complete.

Assumptions

The following assumptions will be made:

1. Results of the Comprehensive Feeding Practices Questionnaire were an accurate reflection of the participants' child feeding practices at the time of completion.
2. The participants were able to read Standard English.

Delimitations

1. Participants recruited for this study were male and female parents and legal guardians from the Perkins-Tryon School Elementary and Middle Schools in Perkins, Oklahoma.
2. Subjects that volunteered for this study were entered into a drawing for a gift card in order to increase parental participation.
3. Participants were limited to individuals who were over the age of 18 years.
4. Data was collected from participants on one occasion.

Hypotheses

The following null hypothesis was examined:

H_01

The CFPQ validated for mid to upper SES parents/guardians in an urban community will have similar components for lower SES parents/guardians in a rural community.

Definition of Terms

Body Mass Index- Body Mass Index (BMI) is a number calculated from a person's weight and height (weight in kilograms/height in meters squared). BMI provides a reliable indicator of body fatness for most people and is used to screen for weight categories that may lead to health problems (CDC, 2006). According to the American College of Sports Medicine, a BMI between 25-29.9 is considered overweight, and a BMI greater than 30 is obese (2000).

Mastery Experience - This construct represents one of the four key processes for building self-efficacy. Past success raises self-efficacy; past failure lowers self-efficacy (Bandura, 1965).

Modeling- The Social Cognitive Theory (Bandura, 1977) presents a concept referred to as “modeling” or observational learning (i.e. the process by which individuals learn by observing others). Bandura (1977) proposed four basic components of observational learning: attention, retention, motor reproduction, and motivation.

Overweight/Obese- According to the CDC, overweight and obesity are both labels for ranges of weight that are greater than what is generally considered healthy for a given height. The terms also identify ranges of weight that have been shown to increase the likelihood of certain diseases and other health problems (CDC, 2006).

Parental Practices - The term parental practices describes strategies employed by parents or caregivers to achieve certain goals. Parenting styles are used to aid in practices, and can help or hinder practices employed by parents or caregivers. Parenting styles tend to be more trait-oriented, whereas parenting practices are state-oriented (Levine, 1988).

Parental Style - Parenting style is defined by developmental psychologists as a type of attitude and behavior that characterizes how the parent will interact with the child

across all aspects of parenting (Darling & Steinberg, 1993). There are four general styles of parenting: authoritative, authoritarian, indulgent, and neglectful. Parenting styles often have a secondary effect on their child's outcomes. The styles parents employ often times regulate their parenting practices.

Quality of Life- is the degree of well being felt by an individual or group of people (Glanz, Rimer, & Lewis, 2002).

Self-efficacy-According to psychologist Albert Bandura (1977), self-efficacy is defined as a persons beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves, and behave. Self-efficacy derives from four main sources of influence—mastery experience, vicarious experience, social persuasion, and emotional states.

Socioeconomic Status (SES) - A family's socioeconomic status is based on family income, parental education level, parental occupation, and social status in the community (such as contacts within the community, group associations, and the community's perception of the family) (Demarest, Reisner, Anderson, Humphrey, Farquhar, & Stein, 1993).

CHAPTER II

REVIEW OF LITERATURE

Parents may inadvertently promote child weight gain by using inappropriate feeding techniques such as pressure, restriction, and control (Clark, Goyder, Bissell, & Peters, 2007). Nearly one-third of all mothers misclassified overweight children as being lower than their measured weight status. Mothers were also more likely to classify their daughters who were actually at risk of overweight as being overweight than their sons (Maynard, Galuska, Blanck, & Serdula, 2003). Huang and colleagues (2007) noted that parents' perceptions of their own children's weight status are influenced by their children's characteristics and do not seem highly correlated with their weight perceptions of unrelated children. These findings make one wonder why parents seem unable to classify their children as overweight or obese. Mothers felt it was the doctor's responsibility as a health professional to raise the issues with the child if he/she was concerned about the child's weight as long as the discussion included advice. At the same time, mothers also stated they would be upset if the physician told them their child was overweight. When children were overweight but resembled their parents or families who were also overweight, mothers found it more difficult to classify their children as being overweight (Pagnini, Wilkenfeld, King, Booth, & Booth, 2007).

Fulkerson et al. (2002) and Hackie and Bowles (2007) found that mothers who viewed their children as overweight were significantly heavy themselves, and of those children viewed as overweight, a majority of boys and girls were classified as non-overweight by federal guidelines. This finding suggests that parents who are concerned about their children's weight may put them at risk for overeating, binge eating, and fasting practices. Another group of researchers found that parents' concern about their children's weight status was associated with lower body esteem and lower perceived cognitive ability among girls (Davison & Birch, 2001). It has also been found that minority mothers were more likely to misclassify their children's weight status (Bloom, Dey, & Freeman, 2005; Killion, Hughes, Wendt, Pease, & Nicklas, 2006; Taveres, Gortmaker, Mitchell, & Gillman, 2008). Francis et al. (2001) found that mothers who perceived their daughters as overweight also had elevated weight concerns of their own. They further reported more authoritarian feeding practices in families where daughters were heavy or mothers were concerned about the weight of their children.

Adolescents and Obesity

Data from two NHANES (National Health and Nutrition Examination Survey) surveys (1976–1980 and 2003–2004) show that the prevalence of individuals who are overweight is increasing: for those aged 12–19 years, the prevalence increased from 5% to 17%. In 1999, 27% of children in Oklahoma aged 6-19 years were overweight. The numbers have tripled for this population in the last two decades (CDC, 2005), and are continuing to rise. There are several health problems at stake other than mere overweight/obesity. According to Swallen, Reither, Haas, and Meyer (2005), adolescents who have a higher than average BMI are more likely to have a poor physical quality of

life. The increase in BMI can, in turn, lead to more serious health consequences, especially for adolescents. Many processes that can lead to disease begin in childhood. Thus, the age at which one becomes overweight/obese can be critical. Being overweight as a child is considered a risk factor for being overweight as an adult meaning that overweight children are more susceptible to serious physical and emotional health issues as adults (Dietz, 1998; Reilly, 2005; Whitaker, Wright, Pepe, Seidel, & Dietz, 1997).

For adolescents who are overweight/obese, the physical complications that can affect them are not the only issues that can affect their lives. They can also have significant psychosocial ramifications. Overweight/obese adolescents are more likely to be teased, bullied, or discriminated against (Neumark-Sztainer et al., 2002; Harper, 2006; American Heart Association, 2007). This, in turn, can lead to emotional distress (Viner et al., 2006), especially about body perception. Li and colleagues (2007) found that overweight girls especially, show a significantly higher depression rate than their normal weight counterparts, which can be explained by body dissatisfaction. The increased risk of depression is noteworthy with overweight/obese adolescents; of the adolescents in the United States, 29% show depressive symptoms (Daniels, 2005). An increased risk of depression will generally result in a decrease in both self-esteem and self-efficacy, as well (Berry, Naylor, & Wharf-Higgins, 2005; Pinhas-Hamiel et al., 2006).

Emotional distress can also lead to increased stress/anxiety and participation in high risk behaviors such as smoking, alcohol and drug use, violence, and sex (Nelson & Gordon-Larsen, 2006).

Food Consumption

Together with the increase in sedentary activities and the decrease in physical activity, there is also an increase in the consumption of poor quality foodstuffs (Domel et al., 1994; Cullen, Bartholomew, Parcel, & Koehly, 1998; Ackard, Neumark-Sztainer, Story, & Perry, 2003; Fulkerson et al., 2006). Poor quality food can include fast foods, sugar-sweetened beverages (soda or soft drinks), and high fat and high sugar snacks. Boutelle, Fulkerson, Neumark-Sztainer, Story, and French (2006) found that parents who reported purchasing fast food for family meals three or more times a week were more likely to have soda and potato chips available in the home for snacking than parents who purchased fewer fast food meals.

Since fast foods and sugar-sweetened beverages are inexpensive, it is no wonder that their consumption has increased, while fruit and vegetable consumption has decreased (French, Story, Neumark-Sztainer, Fulkerson, & Hannan, 2001). Per capita, soft drink consumption increased 100% between 1980 and 1994. For each additional sugar-sweetened beverage consumed, both BMI and occurrence of obesity increased. In other words, the odds ratio of becoming obese among adolescents increase 1.6 times for each additional sugar-sweetened beverage consumed (Ludwig, Peterson, & Gortmaker, 2001).

However, as the consumption of fast food meals rises, there is a significant decrease in the family meals consumed in the home (Paeratukal, Ferdinand, Champagne, Ryan & Bray, 2003; Videon, 2003; Arcan et al., 2007). Both adolescents and parents perceive family meals positively (Fulkerson, Neumark-Sztainer, & Story, 2006). However, Nicklas, Morales, Linares, Yang, Baranowski, de Moor, and Berenson (2004)

showed that adolescent reports of consuming family meals together decreased from 89% in 1973 to 75% in 1994. Moreover, it is fair to assume that this percentage has decreased even more in the last decade. This trend represents a need for more research to examine the barriers to eating family meals together.

Chronic Disease

Many researchers (Harper, 2006; Piko & Keresztes, 2006; Goran, Reynolds, & Lindquist, 1999) have found that physical inactivity directly leads to an increased BMI, which subsequently leads to an increase in risk factors for chronic diseases.

Diseases that previously were only associated with middle-aged individuals are appearing in adolescents. Coronary Vascular Disease (CVD), hypertension, Type II Diabetes, and high cholesterol have been identified in adolescents (Field, Cook, & Gilman, 2005). Although most adolescents do not present these conditions at young ages, they can experience several seemingly less harmful conditions that may lead to extreme health consequences. Atherosclerotic plaque has been found in adolescents and generally originates within the first two decades of life (Harrell, et al., 1998). Plaque gives rise to controllable risk factors including high cholesterol, high blood pressure, diabetes, obesity, and physical inactivity (American Heart Association, 2008). Atherosclerotic plaque is what builds up on the walls of the arteries and can lead to coronary diseases.

In many instances, obesity is largely attributed to a sedentary lifestyle with little or no physical activity. Uncontrollable risk factors for CVD include sex, age and family history of the disease. This information is important because it reveals that lifestyle choices, such as being sedentary or engaging in physical activity may play a role in preventing or acquiring diabetes.

SES

Families who live in poverty tend to have a disproportionate share of obese children (Neumark-Sztainer, Hannan, Story, Croll, & Perry 2003; Harper, 2006; Hughes et al., 2006). Vereecken, Keukelier, and Maes (2004) reported that adolescents of higher socio-economic status (SES) have diets more consistent with dietary guidelines than adolescents from lower SES. Sweeny and Horishita (2005) found that adolescents whose families were below the poverty line were more likely to be involved in the free school lunch and breakfast program, but were also more likely to skip breakfast.

Most adolescents have no choice in the food that is purchased at home or available to them at school. One can assume that parents do the grocery shopping and that the school is in charge of its breakfast and lunch programs. However, research suggests that 65% of adolescents' food intake is consumed at home (Neumark-Sztainer, Wall, Story, & Fulkerson, 2004; Fulkerson, et al., 2006; Larson, Story, Eisenberg, & Neumark-Sztainer, 2006). One can also assume that parents are not home all the time to monitor adolescents' consumption of food. Since most adolescents might not know proper serving sizes, they tend to eat more than a single serving size.

Parenting Practices/Styles and Child Feeding

Parenting style is defined by developmental psychologists as a type of attitude and behavior that characterizes how the parent will interact with the child across all aspects of parenting (Darling & Steinberg, 1993). There are four general styles of parenting: authoritative, authoritarian, indulgent, and neglectful (Holden & Miller, 1999; Patrick, Nicklas, Hughes, & Morales, 2005; Blissett & Haycraft, 2007). Parenting styles often

have a secondary effect on children's outcomes. The styles parents employ often times regulate their parenting practices. The term parenting practices often describes strategies employed by parents or caregivers to achieve certain goals. Parenting styles are used to aid in the practices and can help or hinder practices employed by parents or caregivers. Parenting styles tend to be more trait-oriented (personality) whereas parenting practices are state-oriented (time of action) (Levine, 1988).

Hughes and colleagues (2005) examined parenting styles in a child-feeding context, looking specifically at Hispanic and African-American families, through a self-report questionnaire of feeding practices and feeding styles. Upon completion of the questionnaires, Hughes and colleagues placed parents into four different feeding styles: authoritarian, authoritative, indulgent and uninvolved or neglectful. Three different questionnaires were used. The authors found that Hispanic parents were more likely to be indulgent, whereas African-American parents were more likely to be uninvolved or neglectful.

Feeding Questionnaires

Several feeding questionnaires address childcare providers only while others are designed for mothers only or fathers only. A majority of these questionnaires only focus on three main subscales: concern of weight, and parental control (Birch et al., 2001; Keller, Pietrobelli, Johnson, & Faith, 2006). However, questionnaires tend to miss important information such as parental modeling, parents' nutrition knowledge, and other variables. The Comprehensive Feeding Practices Questionnaire (CFPQ) by Musher-Eizenmann and Holub (2007) attempted to break through previous barriers by examining other constructs that can affect child-feeding practices. The CFPQ is comprised of twelve

subscale constructs: child control, emotion regulation, balance and variety, environment, food as reward, involvement, modeling, monitoring, pressure, restriction for health, restriction for weight control, and teaching about nutrition.

The CFPQ is a new tool measuring child-feeding practices. The initial validation was composed of 269 mothers and 248 fathers with children between the ages of 3 and 6. Median ages of the mothers and fathers were 34.5 and 36.3 years, respectively. The median income of participants was between \$55,000-\$75,000 and the median education level was college graduate. During the initial validation, Musher-Eizenmann and Holub (2007) discovered several problematic issues with confusion and low variability.

In the second study of the CFPQ, the researchers looked at additional item generation and validation of new items. This study consisted of 33 mother-father pairs with children between 4 and 6 years of age, with the same median age and income level as the initial study. The researchers mentioned the validity, but no statistics were provided to confirm or deny validity.

In the third and final study, the sample consisted of 152 mothers with children between the ages of 1.6 and 8 years. The median age of mothers was 34.6 years and the median income was \$75,000-\$95,000, with the median education level at a master's degree. The third study involved a confirmatory factor analysis to determine if the wider age span still resulted in the same results as the initial study. The fit for the final model was "good" [$\chi^2(1061) = 1580$, RMSEA = .057, CFI = .98]. The researchers also calculated bivariate correlations to make sure the subscales related to one another. Monitoring correlated positively with a positive environment, modeling, and encouraging balance and variety, and negatively with food for emotion regulation, food as a reward,

and child control. Modeling, encouraging balance and variety, and involving children in food preparation were also positively correlated with each other and with teaching about nutrition and creating a healthy food environment (Musher- Eizenman & Holub, 2007). However, several of the questions that formed the constructs were based on open-ended questions and not necessarily on research and theory.

According to Musher-Eizenman and Holub (2007), validation of the CFPQ yielded positive results, and the factor analysis suggested that the items formed a coherent scale. The reliability of each construct or component measured was reported with Cronbach's alpha coefficients ranging from .58 to .81, however an overall alpha coefficient was not provided. Considering the CFPQ is so new, it is doubtful there has been time to produce a reliable and valid study, there is only one study, the researcher knows of as of April 2009. The internal consistency of most scales were high, however, test-retest reliability would increase confidence. Another possible problematic issue of the CFPQ is that in each of the validation studies, 90% or more of the samples were Caucasian so little is known of its use in ethnic and minority populations.

The CFPQ is based on the widely used Child Feeding Questionnaire (CFQ) (Birch, et al., 2001). The Child Feeding Questionnaire was first published in 2001 to measure parental beliefs, attitudes, and practices regarding child feeding. The CFQ is a 31-item scale originally designed for parents of children aged 2-11. The CFQ contains seven subscales, including perceived responsibility, perceived parental weight, perceived child weight, concern about child weight, restriction, pressure to eat, and monitoring. As of February 2008, there are between 50-60 studies using the CFQ; most researchers have taken the Child Feeding Questionnaire and modified it, and a majority of the samples of

the new studies have looked at non-Hispanic, mother-child pairs. Very few of the researchers targeted specific minority populations. A recent study conducted by the initial developers of the CFQ focused on possible use of the questionnaire with adolescents (aged 13-17). While there is potential for looking at parental feeding beliefs, the modifications merely consisted of adding one item (consumption of sugar-sweetened beverages, such as soda) to the questionnaire. The first administration of the CFQ had a Cronbach's α that ranged from 0.70 to 0.92. The range of the Cronbach's α exceeded the minimal criterion of 0.60 for acceptable reliability (Nunnally, 1978). The CFQ was shown in the initial developmental piece to be a good fit for non-Hispanic white samples (Birch, 2001).

Constructs Measured in the CFPQ

Control Control is generally thought of as "controlling a child's food intake" both overtly and covertly. Overt control is considered to be controlling a child's food intake in a way that can be detected by the child and covert control is defined as controlling a child's intake in a way that cannot be detected by the child (Ogden, Reynolds, & Smith, 2000). It can be assumed that by either overtly or covertly controlling the child's food intake, the child does not learn proper nutritional life skills, which could possibly affect the rest of his/her life. Wardle, Carnell and Cooke (2005) found that parental control was correlated with children's fruit and vegetable consumption; therefore, the more parents were in control of their child's dietary habits, the more likely the child was to consume fruits and vegetables. Overweight mothers had significantly higher weight concerns and had significantly higher concerns for their daughters' weight than their non-overweight counterparts. Non-overweight mothers had significantly higher incomes than overweight

mothers did; weight concern usually leads to control of food, and sometimes restriction of food (Francis, Hofer, & Birch, 2001).

Restriction Birch et al. (2001) defines restriction as an attempt to restrict children's intake of the type and amount of food, in particular foods that are usually high in sugar, salt and fat. Johnson and Birch (1994) discuss that restriction is indicative of limiting choices and granting little independence in children. Parental restriction can predict overeating and excess weight gain in children (Klegas, Malott, Boschee, & Weber, 1986). Francis et al. (2001) found that mothers who had concerns about their own weight were more likely to restrict their daughters' food intake in response to fear of becoming overweight or obese. In one particular study, researchers found that only 21% of overweight preschoolers were perceived as overweight. Mothers reporting concern about children's weight were six times more likely to restrict the children's food intake of select foods and were less likely to pressure the children to eat (May, et al., 2007).

Carper and colleges (2000) found that restriction was also associated with higher levels of eating in the absence of hunger. Parents' reports of restrictive feeding practices were associated with higher child disinhibition and greater child consumption in the absence of hunger when children were given free access to an array of palatable snacks (Fisher & Birch, 1999; Galloway, Fiorito, Francis, & Birch, 2006). Early deprivation, potentially including exposure to food insecurity or restriction, may lead to transient decrease in weight in childhood that later rebounds and manifests itself in adulthood (Melgar-Quinonez & Kaiser, 2004).

Pressure to eat Pressure to eat generally appears at mealtimes only. Pressure is more of an indicator of parents' attempts to focus the child away from internal cues to hunger

and satiety (Birch, 1987). As Birch describes, training children to focus on external cues that determine hunger can compromise children's naturally occurring internal cues which can lead to overeating and to becoming overweight. Another study found that higher levels of pressure are associated with lower levels of child food intake and higher ratings of child pickiness. Pressure is also associated with lower dietary quality, longer meal duration, and higher caloric intake (Venture & Birch, 2008). It seems that pressure is applied when children eat too slowly, eat "unhealthy" foods, or display eating behaviors that parents deem unhealthy. Some researchers believe that imposing too much pressure regarding food intake interferes with adolescents' abilities to establish internal hunger cues (Baugham, et al., 2001; Wardle, Sanderson, Guthrie, Rapoport, & Plomin, 2002).

Waxman and Stunkard (1980) studied four overweight boys and compared them to their normal weight brothers. The obese boys consumed significantly more calories and ate faster than their normal weight brothers. In addition, the overweight boys were far less active than their brothers were. Another interesting point to the study was that mothers served their obese sons significantly larger portions than they served the non-overweight brothers and served food more often to them. Parental encouragement to eat correlated positively with both how much time the children spent eating and the relative weight of the children.

Food as Reward/Emotion Regulation In a recent experiment, Temple and colleagues (2008) discovered that overweight children found food more reinforcing and consumed more energy than their smaller peers. In another study, Saelens and Epstein (1996) found that eating food is more reinforcing than selected alternative activities for obese women.

Research has also shown overweight adults find food more reinforcing than leaner adults (Epstein, Leddy, & Temple, 2007).

Parental Involvement An examination of literature reveals that one of the best predictors of short and long-term weight regulation for children 8-12 years old is parental involvement (Epstein, 1996; Golan, 2006; Fulkerson, Strauss, Neumark-Sztainer, Story, & Boutelle, 2007; Schuetzmann et al., 2008). Several other factors related to feeding practices may influence child weight status and/or body composition. In a recent review, 8 of 11 studies found that breastfeeding reduces risk of being overweight in childhood (Birch, et al., 2001). That being said, breastfeeding requires a large amount of parental involvement from the beginning; therefore, it is safe to assume that mothers who make a commitment to be involved in their children's eating habits at an early age will continue to be involved in their children's feeding habits later. Parental involvement also is largely associated with parental socioeconomic status. If parents of lower SES must work long hours, or several jobs, they are less likely to be involved in their children's feeding habits, whereas parents with higher SES would have more time to be involved (Skelton, Busey, & Havens, 2006). A difference in children's food consumption by mothers' education level was completely explained by mothers' consumption and practices (Hupkens, Knibbe, van Otterloo, & Drop, 1998; Vereecken, Keukelier, & Maes, 2004).

Modeling The Social Cognitive Theory presents a concept referred to as "modeling" or observational learning. Bandura (1965) proposed four basic components of observational learning: attention, retention, motor reproduction, and motivation. Research indicates that people pay particular attention to models with characteristics such as trustworthiness (Zimmerman & Jousa, 1979), similarity (McCullagh, 1987), and

perceived competence (Mischel & Grusec, 1966; Paradise, Conway, & Zweig, 1986).

The previous statement leads us to believe that adolescents might be inclined to model parents and peers.

Parents influence children's food preferences and intake patterns through the foods they make available and accessible to their children and by their own food modeling (Michaela & Contento, 1986). Hood and colleagues (2000) found that parents who display high levels of disinhibited eating (i.e. when coupled with high dietary restraint) might foster development of excess body fat in their children. This association may be mediated by direct parental modeling of unhealthy eating behaviors.

To gain acceptance by peers, adolescents may resort to adopting perceived beliefs and behaviors of their peer group such as dieting, bulimic activity, and occasionally anorexic activity (Brewer & Wann, 1998; Field, et al., 2001; Martens, van Assema, & Brug, 2005). In 1997, \$1.3 billion was spent solely on television advertisements directed at children. All media, advertising and marketing budgets aimed at children approached \$12 billion dollars (McNeal, 1999). Even two decades ago, the majority of foods heavily advertised on children's television programs tended to be calorically dense foods, such as sugary breakfast cereals, candy bars, cakes, cookies, and carbonated beverages (Dietz & Gortmaker, 1985). The media frenzy directed toward children is reinforcing negative food choices that parents and adolescents often make.

CHAPTER III

METHODOLOGY

The purpose of this study was to examine the validity of the Comprehensive Feeding Practices Questionnaire in a mid-to-low socioeconomic status bracket. This chapter details the methodology utilized in completion of the study. Chapter III has been divided into three categories: preliminary procedures, operational procedures, and follow-up procedures. The preliminary procedures are further divided into selection of participants, review of literature, and selection of instruments. The operational procedures are further divided into data collection and statistical analyses.

Preliminary Procedures

Selection of the Community

Perkins, Oklahoma was chosen because it is a different population than the original validation. Perkins has approximately 2,600 residents as of 2007, with about 1153 people per square mile. The town proper is approximately 2.23 square miles. In the original validation, the

participants chosen were all from urban areas; Perkins is far from an urban area. The town is located in central Oklahoma, about 15 miles south of Stillwater.

The median income for residents of Perkins in 2007 was \$33,498 and roughly, 11.2% of the community was living below the poverty level (city-data.com).

Participants were asked to participate by completing the Comprehensive Feeding Practices Questionnaire. If parents had more than one child, they were instructed to complete only one questionnaire for the youngest child in the home. To qualify for this study, participants needed to have a child in Perkins-Tryon Elementary or Intermediate schools and be 18 years of age or older.

Written permission to conduct the study was obtained from the Institutional Review Board at Oklahoma State University (Appendix B) and permission from the Perkins-Tryon Superintendent, Mr. Ramsey (Appendix D). All participants read an informed consent advising them of their rights and the benefits of participating.

Review of literature

The scholarly literature on parental feeding practices and styles was identified using on-line database searches facilitated by the Oklahoma State University Library, including ProQuest, PubMed, and PsychInfo. These databases provide access to abstracts and full-text articles, as well as books and doctoral dissertations. For this specific review, searches were limited to research findings published since 1980, with the exception of a few articles including reviews of earlier research. Keywords used in the search were limited to the following:

“parental styles,” “feeding practices,” “parental feeding practices,” “modeling feeding practices,” “child feeding,”

“parental practices,” “child feeding questionnaire,” and “childhood obesity.” Articles published in languages other than English or in non-peer reviewed format were not reviewed.

Selection of instruments

The Comprehensive Feeding Practices Questionnaire (CFPQ) contains 49 questions and was validated by Musher-Eizenman and Holub (2007). The CFPQ also includes the following demographic questions: age, gender, marital status, primary caregiver, number of children in the household aged 18 and under, number of children in the household under the age of 13, number of children between the ages of 13 and 18, number of children who qualify for free or reduced lunches, average household income, parental educational level, parental ethnicity, and parental employment status (Appendix A).

There are several questionnaires that address childcare providers or address only mothers or only fathers. A majority of these questionnaires focus on three main subscales including restriction, concern of weight, and parental control (Birch et al., 2001; Hughes et al., 2006; Keller, Pietrobelli, & Johnson, & Faith 2006). However, these questionnaires tend to miss important information such as parental modeling, parents’ nutrition knowledge, and other key variables. The Comprehensive Feeding Practices Questionnaire (CFPQ) developed by Musher-Eizenmann and Holub (2007) attempts to break through previous barriers and looks at all the constructs that can affect child-feeding practices. The CFPQ examines twelve subscale constructs: child control, emotion regulation, balance and variety, environment, food as reward, involvement, modeling, monitoring,

pressure, restriction for health, restriction for weight control, and teaching about nutrition.

Operational Procedures

Data collection

Participants received the questionnaire through their child's (grades Pre-K through 6th) take home "Wednesday Packet." Included in the packet were instructions to complete the questionnaire. Also included with the questionnaire was a consent form, noting that participation in the study signified their consent (Appendix B). Along with the consent form was a form to complete, with name and phone number, in order to be placed in a drawing for a \$50 Wal-Mart gift card. Upon completion, participants were provided with a self-addressed envelope to seal their questionnaire in and return it to their child's school office where the investigator collected it. There were 800 questionnaires that were sent home and 152 questionnaires returned, resulting in a response rate of approximately 20%.

Parents and legal guardians completed the CFPQ and a demographic sheet (Appendix A). Demographic information consisted of age, gender, marital status, primary caregiver for the child, number of children in the household, number of children under the age of 13, number of children who qualify for free or reduced lunches, number of children between 13 and 18, number of children who qualify for free or reduced lunches, average annual income, education level, ethnicity, and employment status. Data collection required approximately 15-20 minutes for most parents/legal guardians.

Demographic characteristics were computed using SPSS 17.0 (SPSS Inc., Chicago) computer program. No master list was kept of personal identifiers, and no effort was made on the part of the researcher to identify individual answer sheets. Anonymity was protected. Written procedures for the Institutional Review Board indicated that the data would be kept for the period of five years electronically in a secure location and then erased.

Statistical Analyses

There are two questions to ask about an instrument. First, does it possess validity? Validity defined by Messick (1995) is "the appropriateness, meaningfulness, and usefulness of the specific inferences made based on test scores or other modes of measurement." The second thing one must consider is if there is reliability.

Messick (1993) defined construct validity as "the degree to which a test measures a hypothetical construct; usually established by relating the test to some behavior." Two methods were employed to establish construct validity: a) principal components analysis, and b) known group differences.

Principal component analysis (PCA) was the first method of examining construct validity. The rationale for a principal component analysis is to determine constructs (or factors) being measured by the items and to reduce a large number of test items to a smaller number (Diekoff, 1992; Green, 1978; Hair, Anderson, Tatham, & Black, 1995). One of the more positive aspects of the PCA is that it accounts for 100% of the variance. PCA should not be confused with confirmatory factor analysis (CFA), in which an already developed scale's dimensionality is assessed. Within the context of scale

development, PCA can be used to determine if a unidimensional scale is reflected by the items.

Prior to performing a PCA, there are certain tests that are useful to screen variables. The major assumption with a PCA is that the variables share common variance (Hatcher, 1994). The first indicative test is the Kaiser-Maier-Olkin (KMO) statistic which reveals the overall relatedness of the variables. If the KMO is satisfactorily high (.50 or better), according to Kaiser (1974), then the items share enough variance to warrant a PCA. The next preliminary procedure is called Bartlett's Test of Sphericity (1954). The test examines the null hypothesis that the correlation matrix produced is an identity matrix (i.e. one that has all 1.00s in the diagonal). The identity matrix shows variables that are uncorrelated. The third test examines individual variables, and is Kaiser's (1974) Measure of Sampling Adequacy (MSA), which reveals the relatedness of an individual variable with all others. The MSA's are located on the diagonals of the anti-image correlation matrix. A low MSA (below .50) indicates a poor item that needs to be eliminated. However, just because an item yields a large MSA is not a guarantee that it is a good item. A specific item with no relatedness to other items can still yield a large MSA. Since the task of the PCA is to define the relationships, even when no relationships exist. In order to determine the legitimacy of an MSA value, one must also inspect the raw correlation matrix to see if there are any individual correlations close to zero. If more than half of all correlations for that item are smaller than .10 (or -.10 similarly for negatively correlated items) then the item is deleted prior to the PCA (Kaiser, 1974). In short, the PCA is deserted if the KMO is less than .50, or if the Bartlett's Test of

Sphericity is not significant. An individual item is dropped if it yields an MSA score below .50.

The initial method of component retention involved the researcher examining the eigenvalue; values above 1.0 were retained. Using these criteria, the PCA yielded 14 initial components. Cattell's scree plot was used with the PCA to determine the number of components to retain. The data was analyzed for possible breaks in the loadings. Scree plot analyses use eigenvalues' relative position rather than their absolute position within the factor solution. Cattell (1966) called for retaining factors that lie above the elbow of the plot and discarding those below, which is usually a subjective call. Upon review of the scree plot, the researcher concluded that there was no obvious cutoff point but there appeared to be 10 to 15 components. Scree plot analyses should only be used in combination with other methods.

Along with construct validity, the internal consistency was measured to determine how consistent the CFPQ is within itself. Cronbach alpha coefficients were computed. This technique entails calculating the variances for different parts of the test. Nunnally's (1978) recommendations for a minimum acceptability of .60 for scales to be used in basic research were followed.

In summary, the validation of CFPQ involved assessing construct validity and reliability through internal consistency. Content validity had been previously reported (Musher-Ezianman & Holub, 2007) through a review of literature and was outside the scope of this research.

CHAPTER IV

ANALYSES, RESULTS, AND DISCUSSION

The purpose of this study was to assess the validity of the Comprehensive Feeding Practices Questionnaire. Chapter IV is broken into the following categories: Demographic Reports, Examination of Construct Validity, Examination of Reliability, Explanation of Content Validity, and Summary.

Demographic Reports

A total of 152 participants submitted data for this study. Screening of the data included identifying non-responses, and the remaining ($n=139$), were used in the data analysis. Questionnaires with missing data were eliminated. Demographic data are found in Table 1. The researcher has determined, through census data of the geographic region (city-data.com), that the sample was reflective of the intended sample population based on the reported values in these tables. The data set is representative of the target community.

Participants were 139 mothers, fathers, grandparents, and legal guardians, who had children enrolled in the Perkins-Tryon School System (Pre-K through 6th grades), in Perkins Oklahoma. Participant ages ranged from 19 to 65 years ($M= 33.98$).

The average annual income for participants ranged from \$10,000 to \$350,000, with median annual income of \$36,500.00.

All subsequent demographic information is presented in Table 1, and was computed using SPSS statistical package 17.0 (SPSS Inc., Chicago). Information on ethnicity, marital status, primary caregiver, number of children in the house under the age of 18, number of children below the age of 13, number of children between 13 and 18, number of children in the household who qualify for a free or reduced school lunch, parental education level, ethnicity, and employment status was gathered.

Table 1 Demographic Information

<i>Variable</i>	<i>Min-Max</i>	<u><i>M</i></u>	<u><i>SD</i></u>
Age (years)	19-65	33.98	7.72
<u><i>Category</i></u>	<u><i>N</i></u>	<u><i>%</i></u>	
<u>Gender</u>			
Female	123	88.5	
Male	16	11.5	
<u>Marital Status</u>			
Married	90	64.7	
Separated	12	8.6	
Divorced	16	11.5	
Living Together	11	7.2	
Single	11	7.2	
Other	1	0.6	
<u>Primary Caregiver</u>			
Mother	113	63.1	
Father	16	11.5	
Grandparent	8	5.8	
Other	2	1.4	

Table 1 Continued Demographic Information

<i>Category</i>	<i>N</i>	<i>%</i>
<u>Number of Children in the Home</u>		
1	21	15.1
2	61	43.9
3	39	28.1
4+	12	12.9
<u>Number of Children <13</u>		
0	10	7.2
1	45	32.4
2	57	41.0
3	25	18.0
4+	2	1.4
<u>Number of Children ages 13-18</u>		
0	78	56.1
1	33	24.1
2	13	8.6
3	9	6.2
4+	6	4.0
<u>Children enrolled in Free/Reduced Lunch Program</u>		
0	71	51.1
1	24	17.3
2	27	19.4
3	12	8.6
4+	5	3.6
<u>Education Level</u>		
Some High School	11	7.9
High School/GED	34	24.5
Vocational School	15	8.4
Some College	38	27.3
College Degree	41	29.5
<u>Ethnicity</u>		
Caucasian	99	71.2
American Indian	25	18.0
African American	8	5.8
Asian/Pacific Islander	2	1.4
Hispanic	5	3.6
<u>Employment Status</u>		
Full Time	86	61.9
Part Time	17	12.2
Seasonal	7	5.0
Unemployed	29	20.9

Examination of Construct Validity

Data screening procedure, prior to the PCA, a KMO statistic and Bartlett's Test of Sphericity were performed using SPSS 17.0 (SPSS Inc., Chicago) to determine if the sample contained enough variance and commonalities, to warrant a PCA (KMO = .810; Bartlett's Test of Sphericity: $\chi^2 = 2529.912$, $p = .000$). In order to be considered significant the KMO must be at least .50 or better (Kaiser, 1974). Along with the KMO and Sphericity test, Kaiser's (1974) Measures of Sampling Adequacy (MSA) measures the communalities reflected by the items can assist researchers in determining the construct actually being measured. A scale with poorly written items will have low communalities between the item set and the factor. Factor loadings, non-loadings, and cross loadings are indicators of the effectiveness of how the item was worded, as seen on Table 2, as a result both of the tests yielded statistically significant values. The MSA (found on the anti-image correlation matrix) for each item was examined; all but one were above .50 (item 16 = .450, which was eliminated), the minimal MSA value to keep the item (Kaiser, 1974). The results of the screening demonstrated the data was appropriate for the PCA with limited error variance.

Table 2 KMO and Bartlett's Test of Sphericity

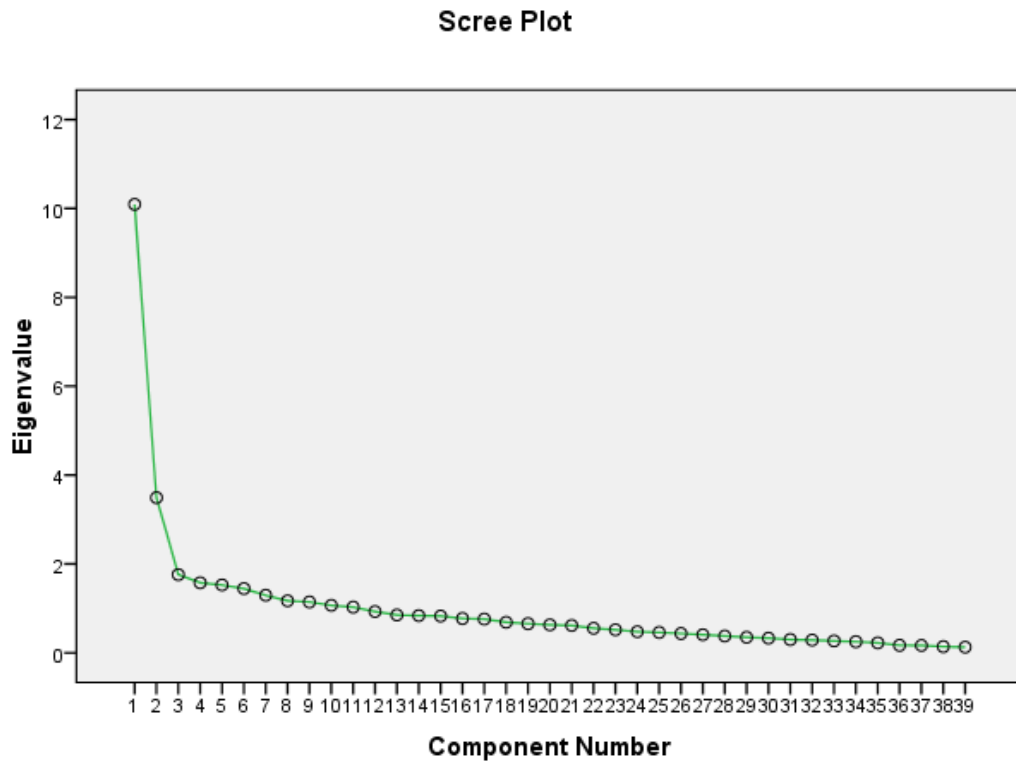
KMO	Bartlett's Test of Sphericity		
	Approx. Chi-Square	df	p
.810	2529.912	800	.000

The principal component analysis was performed using SPSS statistical package 17.0 (SPSS, 2008). In order to identify the underlying conceptual structure of an instrument (the number of factors it measures), the investigator must first determine the

number of components. In this instance, the researcher utilized the scree plot (Figure 1), which was generated by the computer program.

The researcher examined the scree plot to determine the optimal number of components for the CFPQ. The scree plot for the data did not show an obvious elbow (an indicative break or bend) and therefore was not used solely to determine the number of components.

Figure 1 Scree Plot



In principal components analysis, no attempt is made to estimate variance; 100% (or 1.0) is used as the theoretical proportion of shared variance for a given variable instead of trying to calculate an estimate (Kaiser, 1974). This is different from a factor analysis in which we assume all variance can be accounted for.

A PCA with a Direct Oblimen rotation was initially performed; because it is one of a number of methods used to discard variables. The method of rotation assumes that the components are correlated. In a principal component analysis, only the first few components will provide evidence for meaningful variance. Therefore, the researcher has the option to determine which method to use to reduce the number of items. One rotates the PCA component matrix to mirror concepts of developing multi-dimensions from a one-dimensional set (Hair, Anderson, Tatham, & Black, 1995).

Upon review of the Direct Oblimen rotation component correlation, the researcher determined there was low to no correlation among items; therefore, the researcher employed a Varimax rotation. Varimax rotation is frequently used with PCA, which produces uncorrelated components. The communalities reflected by the items can assist researchers in determining the construct actually being measured. A scale with poorly written items will have low communalities between the item set and the factor. Factor loadings, non-loadings, and cross loadings are indicators of the effectiveness of the item wording (Hair, Anderson, Tatham, & Black, 1995). The PCA with a Varimax rotation initially identified 14 components measured by the CFPQ.

The PCA began with 14 components and 48 items. Good items will yield high loadings and simple structure (not loading on more than one component) if an underlying construct is present. Upon review of the rotated component matrix, the researcher can identify which items to retain and which to dispose. Items that loaded at .30 or above were considered for inclusion on the CFPQ and were considered acceptable loadings in preliminary work (Nunnally, 1978).

Component loadings were examined on the rotated component matrix and any loadings that were less than .30 were eliminated, and components that contained less than three items were eliminated. A series of PCAs were performed and the correlations were examined. Due to low component loadings ($< .30$), nine items were eliminated (allowing the child to eat whatever s/he wants, letting the child choose from what is served at dinner, allowing child to snack whenever s/he wants, allowing child to leave the table when full, keeping a lot of snack food in the house, encouraging child to help with grocery shopping, and keeping a lot of sweets in the house). One item with a low MSA (below .50) was dropped, resulting in a 39-item instrument. The items were refactored with the ten items eliminated to produce the final loadings on 11 components. The final component loadings appears in Table 3. The numbers in bold on the table are those that were retained for each factor (i.e. Component One consists of questions 20, 22, 23, 24, 25, 26, 27, 33, 45)

Examination of Reliability

To examine the reliability, the researcher looked at the internal consistency using Cronbach alpha coefficients (Cronbach, 1951) as the measure. This particular technique involves calculating variances for items on the CFPQ. The Cronbach alpha for all eleven components (factors) combined was .641 satisfied Nunnally's (1978) recommendations for a minimum acceptability of .60 for scales to be used in basic research

Table 3 Final Rotated Component Matrix and Factor Loadings

	General	Monitoring	Encouragement	Restriction	Modeling	Regulation	Pressure	Control	Negotiation	Pacification	Pro-Activity
1	.05	.59	.08	-.15	.16	-.04	-.21	.15	-.23	.28	-.12
2	.25	.52	.45	-.23	.17	.02	.03	.05	-.13	.07	.20
3	.13	.65	-.08	.02	.13	-.11	.02	.08	-.12	.15	.10
7	-.13	.004	-.72	.08	-.12	.01	.18	.03	.12	-.12	.08
8	-.14	-.005	-.31	-.01	-.06	-.06	.06	-.05	.56	-.55	-.04
9	-.24	-.05	-.56	.17	.10	-.06	.11	-.38	.03	-.36	.03
10	-.03	-.19	-.12	.11	-.18	-.01	-.02	-.06	.04	-.69	-.07
13	.13	.33	.39	-.07	.29	.08	-.08	.30	-.33	-.11	-.16
14	.09	.22	.18	-.03	.43	-.08	.03	.59	-.14	-.09	.13
15	-.19	.27	-.01	.001	.05	.08	-.03	.08	-.03	.16	.80
17	-.25	-.01	-.18	.15	-.08	-.17	.54	-.35	.12	.25	-.01
18	-.03	.31	-.03	.14	-.10	.80	-.14	.66	.15	.23	-.04
19	-.19	-.16	-.15	.14	-.03	-.01	.29	-.07	.61	0	-.03
20	.46	.56	.16	.01	-.09	.25	-.10	.01	.09	-.03	.26
21	-.27	.14	.11	.08	.22	.69	-.15	.04	-.09	.12	.01
22	.67	.37	.09	-.03	.22	-.03	-.22	.11	.01	.16	-.01
23	-.39	-.03	-.02	.05	-.11	.02	.57	-.16	.25	-.13	.07
24	.58	.28	.37	-.21	.16	.21	.10	.02	-.31	-.06	.04
25	.35	.27	.35	-.12	.31	.08	-.20	.16	.03	.36	.01

Table 3 Continued Final Rotated Component Matrix and Factor Loadings

	General	Monitoring	Encouragement	Restriction	Modeling	Regulation	Pressure	Control	Negotiation	Pacification	Pro-Activity
26	.62	.11	.36	.01	.24	.11	-.17	.06	-.09	.26	.08
27	-.43	-.16	.04	.37	-.01	.16	.09	.06	.48	-.05	-.05
28	.21	-.04	.09	.05	.12	.80	-.01	.11	-.06	-.07	-.04
29	-.16	-.26	.14	.52	-.07	.05	.12	-.03	.43	-.18	-.18
30	.03	-.12	-.28	-.06	-.12	.36	.36	.08	.45	-.01	.004
31	.03	.56	.13	-.06	.27	.15	-.09	.37	-.09	-.08	.15
33	-.63	-.07	-.14	.29	-.07	.10	.19	-.09	.23	.07	-.06
34	-.30	-.02	-.04	.78	.05	.12	.07	0	.07	-.01	.02
35	-.14	-.10	-.24	.68	-.11	.18	.21	.25	-.16	-.01	.09
36	-.05	-.09	-.12	.20	-.06	-.01	.76	.06	.08	-.05	-.02
38	.27	.11	.36	-.19	.15	.08	.08	0.4	-.27	.17	.03
40	-.01	-.01	-.18	.31	.11	.71	.09	-.09	.14	.03	.03
41	-.19	.01	-.22	.65	-.02	.06	.10	-.28	.17	-.12	-.12
42	.18	.18	.49	-.16	.17	-.17	-.42	.04	-.14	.01	.23
43	.13	.27	.18	.20	-.29	.32	-.04	.08	.09	.23	-.49
44	.18	.12	0	-.03	.73	.11	-.24	.09	.01	.16	.04
45	-.46	.16	-.10	.29	-.21	.08	.26	-.40	.19	.02	-.12
46	.23	.10	-.15	.003	.42	.09	.01	.45	.02	.06	-.39
47	.08	.40	.36	-.10	.50	.20	-.13	.16	-.004	.12	.01
48	.14	.16	.22	.05	.73	.24	.03	-.002	-.15	.10	.08

Factor Interpretations

The researcher wrote the items with the corresponding components and attempted to detect common themes then named the components according to the themes. The only original CFPQ component to line up with the revised CFPQ components was modeling.

Component One- General Feeding Practices

Component one was labeled “General Feeding Practices.” Loadings ranged from .350 to .674. The ten items that loaded on this component are general feeding practices questions regarding encouragement, restriction, rewards, negotiation, and regulation. Cronbach’s alpha for this factor was .180 showing very low internal consistency among items.

Component Two- Monitoring

Component two was labeled “Monitoring.” Loadings ranged from .308 to .645. The nine items that loaded on this component dealt specifically with monitoring food intake, weight, and overall health. Examples include: “I have to be sure my child does not eat too many high fat foods,” “How much do you keep track of the sweets (pies, pastries, candy) that your child eats,” and “A variety of healthy foods are available at each meal served at home.” Cronbach’s alpha for this factor was quite good at .816.

Component Three- Encouragement

Component three was labeled “Encouragement.” The eleven questions that loaded in this component dealt with encouragement, either to eat more, eat less, or weigh a certain amount. Loadings for this component range from .308 to .556.

Examples of this component include: “I encourage my child to eat healthy food” and “I encourage my child to eat healthy foods over unhealthy ones.” Cronbach’s alpha for this factor was .502.

Component Four- Restriction

Factor four was labeled “Restriction.” Loadings ranged from .313 to .782. The six items that loaded in “Restriction” deal with restricting the child’s diet to control for weight or health purposes. An example of restriction would be “I do not allow my child to eat between meals because I do not want him/her to get fat.” Cronbach’s alpha for this factor was .766.

Component Five- Modeling

Component five was labeled “Modeling.” The six items that loaded ranged from .310 to .729. These items are looking specifically at parental modeling of healthy behaviors in front of or for their child. An example would be “I show my child how much I enjoy eating healthy foods.” Cronbach’s alpha for this factor was .786.

Component Six- Regulation

Component six was labeled “Regulation.” The five items that loaded ranged from .321 to .796. The name regulation differs from restriction because when one is regulated, there are limits and rules and certain foods are allowed in moderation. With restriction, there is little explanation and certain foods are simply not allowed at all. An example of regulation would be “If I did not guide or regulate my child’s eating s/he would eat too much of his/her favorite foods.” Cronbach’s alpha for this factor was .616.

Component Seven- Pressure

Component seven was labeled “Pressure.” The five items that loaded ranged from .364 to .757. Examples of pressure include “I have to be sure my child does not eat too many sweets,” “My child should always finish all the food on his/her plate,” and “If my child says ‘I’m not hungry,’ I try to get him/her to eat anyways.” Cronbach’s alpha for this factor was .143.

Component Eight- Food Control

Component eight was labeled “Food Control.” The nine items that loaded ranged from -.398 to .665. Examples of food control include “I often put my child on a diet to control his/her weight” and “Do you give this child something to eat or drink if s/he is upset, even when you think they are not really hungry.”

Cronbach’s alpha for this factor was .180.

Component Nine- Negotiation

Component nine was labeled “Negotiation.” The seven items that loaded ranged from -.334 to .610. Examples of negotiation include “I offer my child his/her favorite food in exchange for good behavior,” “I encourage my child to try new foods,” and “I give my child small helpings at meals to control his/her weight.” Cronbach’s alpha for this factor was .198.

Component Ten- Pacification

Component ten was labeled “Pacification.” The four items that loaded ranged from -.692 to .363. The term was chosen because the items in this factor deal with pacification of the child’s emotions relating specifically to food.

Cronbach’s alpha for this factor was -.093.

Component Eleven- Parental Pro-Activity

Component eleven was labeled “Parental Pro-Activity.” This component is dealing with the constructs of the parent being proactive in the child’s feeding needs. Examples of this include “I try to eat healthy food in front of my child, even it is not my favorite” and “I involve my child with planning family meals.” The three items that loaded were -.492, -.393, and .804. Cronbach’s alpha for this factor was -.088.

Summary

Individual items were initially screened, followed by a principal components analysis, and after item reduction, the revised 39-item tool provides some evidence for construct validity. Reliability was assessed by reviewing the internal consistency and showed to be good overall but not necessarily acceptable on individual components in isolation.

CHAPTER V

CONCLUSION

Chapter V first will summarize the purpose and methodology of the present study. Next, the findings of the research are briefly discussed in relation to the null hypothesis. The conclusions drawn from the results of this research are then discussed. Finally, the chapter is concluded with recommendations for future research.

Summary of Purpose

In most research articles today, there is mention of validation procedures, which is a necessary piece. In their study, Musher-Eizenmen and Holub (2007) discuss validation of the CFPQ in different population concerning future research. The purpose of this study was to examine the validity of the CFPQ in a different population. The current Comprehensive Feeding Practices Questionnaire was initially validated with Caucasian mothers who were in a higher than average socioeconomic status bracket. This study assessed the validity of the questionnaire in a mid-to- lower socioeconomic status bracket and a rural community.

Summary of Methodology

Parents and legal guardians over the age of 18 of students from Perkins Tryon Schools (Pre-K thru 6th grades) were recruited by sending home the CFPQ along with an informed consent form, and a chance to win a gift card in the child's "Wednesday Packet." A total of 152 questionnaires were returned and 139 of them were completed correctly.

Summary of Findings

H₀₁ – The CFPQ validated for mid to upper SES parent/guardians in urban communities will have the same components for the lower SES parents/guardians in rural communities. REJECTED

Conclusions

Within the scope of the study and its limitations, the following conclusions were reached. After item reduction techniques were employed, the number of participants to item ratio was appropriate according to Nunnally (1978) (three participants for each item). For 39 items there needed to be at least 117 participants. The current validation process was more complete and it was attempted to be as exploratory as possible with limited to no bias. By allowing the items to determine their own components, the final eleven components were more appropriate than attempting to place the item into the pre-designated component, which was done in the initial validation.

While the initial validation of the CFPQ was done correctly, the methods used were not appropriate. In order to develop an appropriate scale once a theoretical construct is designated for measurement, a large set of items should be generated. According to

DeVellis, more than enough items should be generated before the final selection is made (2003). A homogenous scale's items are reflective of the latent variable(s) variance. Each item should be written reflecting the construct of interest as indicated by theory. This should be reflected in the wording used for each item. Each item should measure only one construct.

Therefore, the scale is a direct result of the items, which it contains. A homogenous scale's items are reflective of the latent variable causing them. This point should be reflected in the wording used for each item. Each item should measure only one construct. Poorly worded items will contain invalid variance not associated with the construct it is actually intended to measure. When constructing the original pool of items, it is better to be redundant than fall short of true measurement (DeVallis, 2003).

Common problems in developing a questionnaire include missing data, question wording, question length, question content, question order, questionnaire length, and types of questions. Missing data, question wording, question content, and question order should be accounted for by selecting at least three subject matter experts (DeVallis, 2003).

In order to have a truly effective questionnaire, one should first explore the constructs by using a PCA or exploratory factor analysis instead of the confirmatory factor analysis (which assesses an already developed scale), which developers of the CFPQ chose to use. This study chose to use a PCA, by going back and seeing if these items do correlate, and work well in a questionnaire looking at something as important as feeding practices. In conclusion, the PCA performed in this study confirms that the CFPQ needs some revisions before being used in a large sample.

Recommendations for Future Research

1. Further revisions need to occur on the CFPQ, and possibly even further decrease the number of components down to three instead of 11.
2. Similar studies should be conducted with a larger sample size.
3. Similar studies should be conducted with more ethnic diversity.
4. There should be a continuation of validity reporting in all future research.

Implications for Health Educators/Health Professionals

There are three big possible implications that this instrument can provide. One implication that may come from a tool that measures the construct of modeling is that it will give valuable insight to the researcher, exactly how the parent/guardian views modeling, whether it is an important factor to them. As researchers, there is an understanding how important observational learning is for children. However, the parent/guardian may not understand this and not view it as important. This tool could provide researchers the knowledge to develop interventions and programs specifically for parents, discussing the importance of observational learning. Another possible implication garnered from the CFPQ is that it can provide insight into the mind of the parent/guardian, how important feeding their children is to them, if it really is a priority. The third is instrument has the possibility to be very helpful when it comes to controlling childhood obesity. By knowing what and how the parent/guardian feeds their child, programs and interventions can be developed to specifically address the problem issues.

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APPENDIX A

COMPREHENSIVE FEEDING PRACTICES QUESTIONNAIRE WITH
DEMOGRAPHIC QUESTIONS

Please circle the number that corresponds with the answer you choose. If you have any questions or do not understand the statement/question being asked, please feel free to write your questions or comments on the questionnaire. Thank you.

	Never	Rarely	Sometimes	Mostly	Always
1. How much do you keep track of the sweets (candy, ice cream, cakes) that your child eats?	1	2	3	4	5
2. How much do you keep track of the snack food (potato chips, cheese puffs, Doritos) that your child eats?	1	2	3	4	5
3. How much do you keep track of the high-fat foods that your child eats?	1	2	3	4	5
4. How much do you keep track of the sugary drinks (soda/pop, kool-aid) that your child drinks?	1	2	3	4	5
5. Do you let your child eat whatever s/he wants?	1	2	3	4	5
6. At dinner, do you let this child choose the foods s/he wants from what is served?	1	2	3	4	5
7. When this child gets fussy, is giving him/her something to eat or drink the first thing you do?	1	2	3	4	5
8. Do you give this child something to eat/drink if s/he is bored even if you think s/he is not hungry?	1	2	3	4	5
9. Do you give this child something to eat/drink if s/he is upset even if you think s/he is not hungry?	1	2	3	4	5
10. If this child does not like what is being served, do you make something else?	1	2	3	4	5
11. Do you allow this child to eat snacks whenever s/he wants?	1	2	3	4	5
12. Do you allow this child to leave the table when s/he is full, even if your family is not done eating?	1	2	3	4	5
13. Do you encourage this child to eat healthy foods before unhealthy ones?	1	2	3	4	5

		Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree
14.	Most of the food I keep in the house is healthy.	1	2	3	4	5
15.	I involve my child in planning family meals.	1	2	3	4	5
16.	I keep a lot of snack food (potato chips, cheese puffs, Doritos) in my house.	1	2	3	4	5
17.	My child should always eat all the food on his/her plate.	1	2	3	4	5
		Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree
18.	I have to be sure my child does not eat too many high-fat foods.	1	2	3	4	5
19.	I offer my child his/her favorite foods in exchange for good behavior.	1	2	3	4	5
20.	I allow my child to help prepare family meals.	1	2	3	4	5
21.	If I did not guide or regulate my child's eating, s/he would eat too much of his/her favorite foods.	1	2	3	4	5
22.	A variety of healthy foods are available to my child at each meal served at home.	1	2	3	4	5
23.	I offer sweets (candy, ice cream, cakes, pies) to my child as a reward for good behavior.	1	2	3	4	5
24.	I encourage my child to try new foods.	1	2	3	4	5
25.	I discuss with my child why it's important to eat healthy foods.	1	2	3	4	5
26.	I tell my child that healthy food tastes good.	1	2	3	4	5
27.	I encourage my child to eat less so he/she won't get fat.	1	2	3	4	5
28.	If I did not guide or regulate my child's eating, he/she would eat too many junk foods	1	2	3	4	5

		Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree
29.	I give my child small helpings at meals to control his/her weight.	1	2	3	4	5
30.	If my child says, "I'm not hungry," I try to get him/her to eat anyway.	1	2	3	4	5
31.	I discuss with my child the nutritional value of foods.	1	2	3	4	5
32.	I encourage my child to participate in grocery shopping.	1	2	3	4	5
33.	If my child eats more than usual at one meal, I try to restrict his/her eating at the next meal.	1	2	3	4	5
34.	I restrict the food my child eats that might make him/her fat.	1	2	3	4	5
35.	There are certain foods my child shouldn't eat because they will make him/her fat.	1	2	3	4	5
36.	I withhold sweets/dessert from my child in response to bad behavior.	1	2	3	4	5
37.	I keep a lot of sweets (candy, ice cream, cakes, pies, pastries) in my house.	1	2	3	4	5
38.	I encourage my child to try a variety of foods	1	2	3	4	5
		Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree
39.	If my child eats only a small helping, I try to get him/her to eat more	1	2	3	4	5
40.	I have to be sure that my child does not eat too much of his/her favorite foods.	1	2	3	4	5
41.	I don't allow my child to eat between meals because I don't want him/her to get fat.	1	2	3	4	5
42.	I tell my child what to eat and what not to eat without explanation.	1	2	3	4	5
43.	I have to be sure that my child does not eat too many sweets (candy, ice cream, cake or pastries).	1	2	3	4	5
44.	I model healthy eating for my child by eating healthy foods myself.	1	2	3	4	5
45.	I often put my child on a diet to control his/her weight.	1	2	3	4	5
46.	I try to eat healthy foods in front of my child, even if they are not my favorite.	1	2	3	4	5
47.	I try to show enthusiasm about eating healthy foods.	1	2	3	4	5
48.	I show my child how much I enjoy eating healthy foods.	1	2	3	4	5
49.	When s/he says s/he is finished eating, I try to get my child to eat one more (two more, etc.) bites of food.	1	2	3	4	5

Thank you for completing the questionnaire. Please send this back in the enclosed envelope to your child's school office.

1.	What is your current age?	_____					
2.	What is your gender?	Male	Female				
3.	What is your current marital status?	Married	Separated	Divorced	Living Together	Single	Other
4.	Who is the primary caregiver for the child?	Mother	Father	Grandparent	Other		
5.	How many children are in your household currently?	1	2	3	4+		
6.	What is the number of children in the household under age 13?	1	2	3	4+		
7.	What is the number of children in the household aged 13-18?	0	1	2	3	4+	
8.	How many of these children qualify for free or reduced school lunches?	0	1	2	3	4+	
9.	What is your average annual income?	_____					
10.	What is your current education level?	Some High School	High School/ GED	Vocational School	Some College	College Degree	
11.	What is your ethnicity?	White	American Indian	African American	Asian/Pacific Islander	Hispanic	Other
12.	What is your current employment status?	Full-Time	Part-Time	Seasonal	Unemployed		

APPENDIX B

INFORMED CONSENT

Cover Sheet/Informed Consent

- Project Title:** Comprehensive Feeding Practices Questionnaire: A validation study in a rural population
- Investigator:** Jesse Fowler Burk, B.S.
Bridget M. Miller, Ph.D.
- Purpose:** The purpose of this study is to explore the relationship between parental feeding practices and childhood obesity.
- Procedures:** The project will consist of the participant filling out a survey, which contains scale questions related to current parental feeding practices. The survey will be filled out once. Completing the survey will take 20-30 minutes each time. This data will be used to examine the relationships between the aforementioned variables.
- Risks:** There are no known risks associated with this project which are greater than those ordinarily encountered in daily life.
- Benefits:** This study will benefit the research community in this area. This will further knowledge about the parental feeding practices and childhood obesity. We hope to design interventions based on the knowledge gained through this project so that we can positively influence health choices feeding practices made by parents with children in elementary and middle schools.
- Confidentiality** All information obtained throughout this study will be stored and locked in the primary investigator's office. Paper copies of the survey responses will be kept for a one year period. Data collected will be used for study purposes only. Please note that the OSU Institutional Review Board has the authority to inspect consent records and data files to assure compliance with approved procedures.
- Compensation:** All parents/guardians who complete the questionnaire will be entered into a drawing for a \$50 gift card to Wal-Mart.

Contact: Should you have any questions regarding this study, please contact:

Jesse F. Burk
428 Willard
Oklahoma State University
Stillwater, OK 74078
405-612-9947

Dr. Bridget Miller
427 Willard
Oklahoma State University
Stillwater, OK 74078
405-744-7680

If you have questions about your rights as a research volunteer, you may contact:

Dr. Shelia Kennison, IRB Chair
219 Cordell North
Oklahoma State University
Stillwater, OK 74078
405-744-1676
irb@okstate.edu

Participant Rights: Participation in this project is voluntary. If at any time you wish to discontinue the activity, you may do so without any reprisal.

By participating in this study, I indicate that I accept the aforementioned terms. I also understand that all information I provide is strictly confidential and will be used for study purposes only. I also understand that I will remain anonymous throughout the course of this study. I am free to discontinue participation during data collection at any time. **My agreement to take part in this study is signified by my participation.**

-----Please Tear Here-----

Name: _____
(please print)

Phone Number: _____

By turning this in separately from the questionnaire, I am signifying that I completed the questionnaire, and will be placed in a drawing for a \$50 gift card to Wal-Mart.

APPENDIX C

IRB APPROVAL LETTER

Oklahoma State University Institutional Review Board

Date: Thursday, January 29, 2009
IRB Application No ED0913
Proposal Title: Comprehensive Feeding Practices Questionnaire: A validation study in a rural population
Reviewed and Processed as: Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 1/28/2010

Principal Investigator(s):

Jesse Burk	Bridget Miller
428 Willard Hall	427 Willard
Stillwater, OK 74078	Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

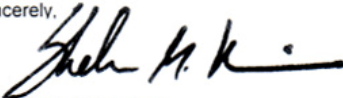
The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Shelia Kennison, Chair
Institutional Review Board

APPENDIX D

APPROVAL FROM SCHOOL

From **James Ramsey** <jeramsey@p-t.k12.ok.us>
to Jesse Burk <jessefburk@gmail.com>
date Thu, Jan 15, 2009 at 10:56 AM
subject Re: Burk: Take Home Questionnaire

hide details Jan
15 Reply

Ms. Burk,

I spoke to Mr. Simma and he said it was all right to collect the information. Schedule a time for the questionnaire to be sent out. Good luck.

James Ramsey

APPENDIX E

Revised Comprehensive Feeding Practices Questionnaire

Please circle the number that corresponds with the answer you choose. If you have any questions or do not understand the statement/question being asked, please feel free to write your questions or comments on the questionnaire. Thank you.

	Never	Rarely	Sometimes	Mostly	Always
1. How much do you keep track of the sweets (candy, ice cream, cakes) that your child eats?	1	2	3	4	5
2. How much do you keep track of the snack food (potato chips, cheese puffs, Doritos) that your child eats?	1	2	3	4	5
3. How much do you keep track of the high-fat foods that your child eats?	1	2	3	4	5
4.* How much do you keep track of the sugary drinks (soda/pop, kool-aid) that your child drinks?	1	2	3	4	5
5.* Do you let your child eat whatever s/he wants?	1	2	3	4	5
6.* At dinner, do you let this child choose the foods s/he wants from what is served?	1	2	3	4	5
7. When this child gets fussy, is giving him/her something to eat or drink the first thing you do?	1	2	3	4	5
8. Do you give this child something to eat/drink if s/he is bored even if you think s/he is not hungry?	1	2	3	4	5
9. Do you give this child something to eat/drink if s/he is upset even if you think s/he is not hungry?	1	2	3	4	5
10. If this child does not like what is being served, do you make something else?	1	2	3	4	5
11.* Do you allow this child to eat snacks whenever s/he wants?	1	2	3	4	5
12.* Do you allow this child to leave the table when s/he is full, even if your family is not done eating?	1	2	3	4	5
13. Do you encourage this child to eat healthy foods before unhealthy ones?	1	2	3	4	5

		Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree
14.	Most of the food I keep in the house is healthy.	1	2	3	4	5
15.	I involve my child in planning family meals.	1	2	3	4	5
16. *	I keep a lot of snack food (potato chips, cheese puffs, Doritos) in my house.	1	2	3	4	5
17.	My child should always eat all the food on his/her plate.	1	2	3	4	5
		Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree
18.	I have to be sure my child does not eat too many high-fat foods.	1	2	3	4	5
19.	I offer my child his/her favorite foods in exchange for good behavior.	1	2	3	4	5
20.	I allow my child to help prepare family meals.	1	2	3	4	5
21.	If I did not guide or regulate my child's eating, s/he would eat too much of his/her favorite foods.	1	2	3	4	5
22.	A variety of healthy foods are available to my child at each meal served at home.	1	2	3	4	5
23.	I offer sweets (candy, ice cream, cakes, pies) to my child as a reward for good behavior.	1	2	3	4	5
24.	I encourage my child to try new foods.	1	2	3	4	5
25.	I discuss with my child why it's important to eat healthy foods.	1	2	3	4	5
26.	I tell my child that healthy food tastes good.	1	2	3	4	5
27.	I encourage my child to eat less so he/she won't get fat.	1	2	3	4	5
28.	If I did not guide or regulate my child's eating, he/she would eat too many junk foods	1	2	3	4	5

		Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree
29.	I give my child small helpings at meals to control his/her weight.	1	2	3	4	5
30.	If my child says, "I'm not hungry," I try to get him/her to eat anyway.	1	2	3	4	5
31.	I discuss with my child the nutritional value of foods.	1	2	3	4	5
32.*	I encourage my child to participate in grocery shopping.	1	2	3	4	5
33.	If my child eats more than usual at one meal, I try to restrict his/her eating at the next meal.	1	2	3	4	5
34.	I restrict the food my child eats that might make him/her fat.	1	2	3	4	5
35.	There are certain foods my child shouldn't eat because they will make him/her fat.	1	2	3	4	5
36.	I withhold sweets/dessert from my child in response to bad behavior.	1	2	3	4	5
37.*	I keep a lot of sweets (candy, ice cream, cakes, pies, pastries) in my house.	1	2	3	4	5
38.	I encourage my child to try a variety of foods	1	2	3	4	5
		Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree
39.*	If my child eats only a small helping, I try to get him/her to eat more	1	2	3	4	5
40.	I have to be sure that my child does not eat too much of his/her favorite foods.	1	2	3	4	5
41.	I don't allow my child to eat between meals because I don't want him/her to get fat.	1	2	3	4	5
42.	I tell my child what to eat and what not to eat without explanation.	1	2	3	4	5
43.	I have to be sure that my child does not eat too many sweets (candy, ice cream, cake or pastries).	1	2	3	4	5
44.	I model healthy eating for my child by eating healthy foods myself.	1	2	3	4	5
45.	I often put my child on a diet to control his/her weight.	1	2	3	4	5
46.	I try to eat healthy foods in front of my child, even if they are not my favorite.	1	2	3	4	5
47.	I try to show enthusiasm about eating healthy foods.	1	2	3	4	5
48.	I show my child how much I enjoy eating healthy foods.	1	2	3	4	5
49.*	When s/he says s/he is finished eating, I try to get my child to eat one more (two more, etc.) bites of food.	1	2	3	4	5

Thank you for completing the questionnaire. Please send this back in the enclosed envelope to your child's school office.

*Numbers with the asterisk added were items that were subsequently dropped after Kaiser's (1974) Measure of Sampling Adequacy and item reduction analysis

VITA

Jesse Fowler Burk

Candidate for the Degree of

Master of Science

Thesis: COMPREHENSIVE FEEDING PRACTICES QUESTIONNAIRE: A
VALIDATION

Major Field: Health Promotion

Biographical:

Personal Data: Born in Tulsa, Oklahoma on January 12, 1983, the daughter of Catherine and John Rogers Fowler

Education: Graduated from Perkins-Tryon High School, Perkins, Oklahoma in May 2001; received Bachelors of Science degree in Health and Human Performance from Oklahoma State University, Stillwater, Oklahoma in May 2005; will have completed the requirements for the Master of Science degree in Health and Human Performance at Oklahoma State University, Stillwater, Oklahoma in May 2009.

Experience: Graduate Research Assistant, Seretean Wellness Center (2006-2008); Community Educator, Stillwater Medical Center (2007-2008); Graduate Teaching Assistant, Total Wellness (2008-present); Speaker, Kappa Kappa Psi/Tau Beta Sigma National Convention, Phoenix, AZ (2009).

Professional Memberships: American College Health Association

Name: Jesse Fowler Burk

Date of Degree: May, 2009

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: COMPREHENSIVE FEEDING PRACTICES QUESTIONNAIRE: A
VALIDATION STUDY IN A LOWER SOCIOECONOMIC STATUS
COMMUNITY

Pages in Study: 76

Candidate for the Degree of Master of Science

Major Field: Health Promotion

Scope and Method of Study: The purpose of this study was to examine the validity of the Comprehensive Feeding Practices Questionnaire (CFPQ) in a lower socioeconomic status (SES) bracket. The original CFPQ was validated in a highly educated population with a high SES. The CFPQ was sent home to 800 parents/caregivers in a rural community, 152 questionnaires were returned, with 139 being completed correctly by mothers, fathers, or grandparents. Median age of the participant was 33.8 years and the median income was approximately \$48,000; compared to the original CFPQ average income range between \$75,000–\$95,000.

Findings and Conclusions: Within the scope of the study and its limitations, the following conclusions were reached. After item reduction techniques were employed, the number of participants to item ratio was appropriate (3 participants: 1 item), with 139 participants and 39 items there needed to be at least 117 participants. The validation process was more complete and it was attempted to make the research as exploratory as possible with limited to no bias. By allowing the items to determine their own components, the final eleven components were more appropriate, than attempting to place the item into the pre-designated component.

ADVISER'S APPROVAL: Dr. Bridget Miller
