DEVELOPMENT OF A MEASURE TO ASSESS PARENT PERCEPTIONS OF BARRIERS TO HEALTHY CHILD WEIGHT MANAGEMENT

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Degree of Master of Arts

by

Katherine E. Darling

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Thesis written by

Katherine E. Darling

B.A., College of Wooster, 2013

M.A., Kent State University, 2016

Approved by

Amy F. Sato, Assistant Professor, Ph.D., Department of Psychological Sciences, Masters Advisor

Manfred van Dulmen, Acting Chair, Ph.D., Department of Psychological Sciences

James Blank, Dean, Ph.D., College of Arts and Sciences
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Introduction

Approximately one-third of children and adolescents in the United States are either overweight or obese (Ogden, Carroll, Kit, & Flegal, 2012). Obesity in childhood puts children at risk for multiple negative psychosocial outcomes, including decreased quality of life, depressive symptoms, and peer victimization (Kraak, Liverman & Koplan, 2005). Childhood obesity may also contribute to poor physical health outcomes in both childhood and into adulthood, including Type II diabetes, hypertension, metabolic syndrome, cardiovascular disease, and decreased life expectancy (Eisenmann, 2003; Fontaine, Redden, Want, Westfall & Allison, 2003; Ogden et al., 2012). Given these clear negative outcomes, it is crucial to gain an understanding of the barriers that exist to maintaining a healthy lifestyle among children and adolescents. Barriers have been examined within other areas of child chronic health conditions (Irvine, Saunders, Blank, & Carter, 1990; Mulvaney et al., 2006) but no quantitative measure currently exists to examine barriers to maintaining a healthy lifestyle within the family. A small but growing body of evidence suggests that many children and families do not feel well equipped to address barriers (e.g., limited access to resources, lack of time availability) contributing to childhood obesity (Murtagh, Dixey, & Rudolf, 2006; Uzark, Becker, Dielman, Rocchini, & Katch, 1988). The present study seeks to develop a quantitative measure of parents’ perceptions of barriers to healthy weight management within the family context.

Healthy Family Lifestyle
Understanding what is included in leading a healthy lifestyle may help identify the barriers to various aspects of healthy weight management. The American Academy of Pediatrics supports a healthy active lifestyle model (Davis et al., 2007). Within this model, children should have five servings of fruits and vegetables, two or less hours of screen time, one hour of physical activity, and limiting sugar-sweetened drinks every day (Krebs & Jabobson, 2003). A healthy family lifestyle incorporating these diet and exercise components decreases the risk for pediatric obesity, as well as Type II diabetes and heart disease (Keller and Stevens, 1996; Krebs & Jacobson, 2003; Manson et al., 1999; Sigal et al., 2006; WHO, 1999; Wing, 1999; Wojcicki, & Heyman, 2010).

**Barriers to Health within the Family Context**

Within the family context, examining barriers to establishing or maintaining a healthy lifestyle might aid in understanding factors that hinder child weight management (Barlow & Dietz, 2002). Barriers to a healthy family lifestyle may be conceptualized through the Health Belief Model. The Health Belief Model examines the likelihood that an individual will engage in a specific health-promoting behavior (Becker & Maiman, 1975). Likelihood of action (e.g., physical activity) is a function of perceived benefits of action minus the perceived barriers to taking action (Becker & Maiman, 1975). Barriers, according to the Health Belief Model, impact a healthy lifestyle. However, there is currently no measure examining the barriers that families face in leading a healthy lifestyle.

Other research has examined parent-identified barriers in management of chronic illnesses, which is important to consider as parents play a key role in managing their
child’s chronic illnesses (e.g. type 2 diabetes, asthma). For example, in the pediatric diabetes literature, parents identified barriers related to dietary and exercise habits that may impede management of type 2 diabetes (T2DM; Mulvaney et al., 2006). Identified barriers include availability of healthy foods, parenting skills, and preparation time of healthy food (Gellar, Schrader, & Nansel, 2007; Mulvaney et al., 2006). Similarly, parents of children with asthma identify family characteristics (e.g. structure), time management and the physical environment as barriers to asthma care (Mansour, Lanphear & DeWitt, 2000; Modi & Quittner, 2006). These barriers have been related to medication non-adherence (Drotar & Bonner, 2009) and consequently have a negative effect on disease management. Family contextual barriers are important to assess in pediatric T2DM and asthma management; yet, these barriers do not fully overlap with broader healthy family lifestyle. Further examination is needed in identifying barriers specific to maintaining a healthy family lifestyle to decrease risk of childhood obesity.

**Potential Barriers to Child Weight Management within the Family Context**

Previous literature reveals a range of areas that affect maintenance of healthy weight in children. Parental perceptions of barriers to healthy weight in the family can affect healthy behaviors in children (Hart et al., 2003; Pocock et al., 2010). Many of the factors that impact child healthy weight (e.g., time demands and environmental access) have been explored in relation to child weight, but have not been explicitly conceptualized as barriers. While some research has examined explicit barriers to weight loss in children (e.g. resources for physical activity; Zabinski, Saelens, Stein, Hayden-Wade, & Wilfley, 2003), one goal of this study was to extend previous research by
examining areas of child weight management that may also serve as barriers to healthy weight management within the family context, as barriers affect both prevention and intervention.

Barriers have previously been examined within the context of child weight loss, and the barriers previously identified may be solely applicable to an overweight population. One study created a measure of barriers to weight loss in overweight and obese children; however this measure focuses on barriers that may be solely applicable to this overweight population, such as body-related barriers to physical activity (Zabinski, et al., 2003). Other studies have examined barriers in a more qualitative manner, but have not quantitatively examined patterns of barriers that may exist within families (Goh et al., 2009). Examining barriers to healthy weight management in a quantitative manner, with a broad sample, can have application in clinical settings for both prevention and intervention for childhood obesity.

**Family involvement.** Parent support and involvement – specific to child health behaviors such as physical activity – have been found to be important for child weight management. Specifically, greater parental involvement is associated with greater weight reduction (Fogelholm, Nuutinen, Pasanen, Myohanen, & Saatela, 1999; Golan, Kaufman, & Shahar, 2006). Parental involvement can include role modeling, encouragement, and monitoring of child health behaviors (e.g. eating and exercise; Skouteris, McCabe, Swinburn, Newgreen, Sacher, & Chadwick, 2010). One key factor in determining the amount of physical activity children receive is determined by the amount of time they spend outside, often decided by parents (Sallis, Prochaska, & Taylor, 2000). Not
receiving this involvement or support may represent a barrier children face in maintaining a healthy weight (McLean, Griffin, Toney, & Hardeman, 2003; Vatolina & Marta, 1998). Health care providers have identified lack of parental support as one of the main barriers that they face in helping families to manage pediatric obesity (Story et al., 2002). Even outside of a treatment context, it is likely that parental support and involvement are important for general maintenance of healthy weight. For example, parents who are supportive and involved may be more likely to exercise with their child, or prepare healthy meals within the home (Neumark-Sztainer, 2005).

Less is known about broader family member involvement, but a small number of studies suggest that siblings, parents and extended family affect overall healthy behaviors within the family (Senguttuvan, Whiteman, & Jensen, 2014). Family physical activity and modeling of healthy behaviors within the family environment – by both parents and siblings – predict decreased BMI in overweight children (Timperio et al., 2008). Overall, parental support and involvement, as well as the support and involvement of the family as a whole have been related to decreased risk for obesity and lower levels of family involvement may put children at an increased risk for less healthy behaviors within the family context.

**Time constraints.** Not only does the supportiveness of a child’s family affect his or her own healthy behaviors, but parents’ perceptions of time demands are also related to health behaviors (Jabs & Devine, 2006). More specifically, parents’ perceptions of time demands in the family are also related to positive family meal practices (Lytle et al., 2011). Parents who have more time to devote to their children’s health may have more
time to promote behavior change and effectively manage their children’s health related behaviors (Epstein, Koeske, Wing & Valoski, 1986). In contrast, parents who perceive themselves as not having enough time may be less likely to engage in behaviors such as at-home meal preparation and physical activity, as time demands have been related to increased weight status of children in the family (Hearst et al., 2012).

**Financial barriers.** In addition to barriers associated with the family environment, one of the most commonly cited barriers to healthful eating is the cost of healthy food (Eikenberry & Smith, 2004). Children from lower socioeconomic (SES) backgrounds are less likely to eat balanced meals consistent with healthy guidelines, possibly skipping meals or relying on prepackaged foods more than less calorically dense alternatives (Lee, Harris, & Gorson-Larson, 2009; Turrell, Hewitt, Patterson, Oldenburg & Gould, 2002). For children from a low SES background, financial considerations have been identified to have a great influence on the likelihood that those youth will engage in physical activity (Humbert et al., 2006). For instance, the cost of a gym membership or access to facilities may serve as a barrier to physical activity for many youth. Uncertain access to food and the cost of healthy foods and physical activity facilities may be a particularly salient barrier to healthy behaviors among low-income families.

**Environmental access to healthy choices.** While factors within the family are necessary to consider as barriers to healthy weight, external factors may also serve as barriers to healthy behaviors. The built environment, characteristics of the physical context (e.g., parks, playgrounds, fast food restaurants), surrounding a child may create barriers to activities that directly affect a child’s weight management (e.g., physical
activity, healthy eating). For example, proximity to parks and safe places to play impact physical activity in children (Davidson & Lawson, 2006; Ferdinand, Sen, Rahurkar, Engler, & Menachemi, 2012; Sallis & Glanz, 2009). Low-income areas are more likely to have fewer safe areas for play, and children who live in these areas may be at greater risk for overweight as a result (Gordon-Larsen, Nelson, Page & Popkin, 2006). Parental perceptions of safety and their anxiety related to child safety prevent physical activity (Foster & Giles-Corti, 2008).

The built environment is also related to healthy eating habits. Research has shown that individuals who have greater access to supermarkets with fresh and healthy foods, and have less access to convenience stores, have lower rates of obesity and consume a healthier diet (Larson, Story, & Nelson, 2009). Low-income areas also have a higher density of fast food restaurants (Simon, Kwan, Angelescu, Shih, & Fielding, 2008), and African-American adults in particular, have identified this as one of the barriers to healthy lifestyle changes (Lucan, Barg, & Long, 2010). This suggests that concerns about the built environment may be a barrier for healthy habits within the family.

In summary, as pediatric obesity is a large public health concern it is important to examine the barriers that may hinder healthy weight maintenance and management in children (Murtagh et al., 2006; Ogden et al., 2012). While many individuals understand the negative consequences of overweight and obesity, education alone does not typically lead to sustained changes in health-related behaviors (Warwick, Mcllveen, & Strugnell, 1997). Identification of barriers to a healthy family lifestyle may be key to maintaining a
healthy lifestyle over time. Factors such as lack of support within the family, limited time to devote to healthy behaviors, financial concerns and lack of access to healthy foods or recreational facilities all impede families’ ability to support the healthy weight management of their child.

In order to understand the role of perceived barriers to healthy child weight management, research is needed to develop a psychometrically sound measure of these barriers. Although a small number of studies have evaluated parents’ perceptions of barriers to health outcomes in other pediatric populations (e.g., T2DM), these measures do not address some of the key domains for pediatric obesity risk (e.g., time demands, cost). To our knowledge, no previous measure has been developed to quantitatively examine barriers to a healthy lifestyle within the family context. Previous research has examined barriers qualitatively (Lucan et al., 2010; Murtagh et al., 2006) or examined barriers specific to weight loss in overweight/obese children (i.e. barriers to physical activity in obese children; Zabinski et al., 2003). By examining the barriers to weight management within a normative sample, the factors hindering a families’ ability to support a healthy lifestyle for their child can be identified and addressed before the child becomes overweight or obese. Barriers qualitatively identified by families are important to consider. However, a quantitative measure of barriers specific to healthy pediatric weight management may be more useful for clinical and research diagnostics and intervention. Quantitative examination of these factors may aide clinical intervention to reduce cost and time necessary to understand the barriers to maintaining a healthy family lifestyle. The inclusion of many facets affecting pediatric weight management may
provide a broader measure of barriers to healthy eating and physical activity than previous measures, focused on specific aspects of a healthy lifestyle in a weight control intervention population (Zabinski et al., 2003).

Present Study

The present study sought to extend the previous literature by examining the barriers that exist to healthy weight management in a normative sample of parents with both healthy weight and overweight children. Many families experience barriers affecting healthy lifestyles in children, yet no quantitative measure exists to assess these barriers. The goal of the present study was to develop and validate a quantitative measure of parents’ perception of barriers to healthy weight management in children.
Method

Participants

Parents of children ages 7-17 (N = 812; M parent age = 37.2, SD = 8.3) were recruited online using Amazon Mechanical Turk (MTurk). Average parent BMI (M=28.09; SD = 8.09) fell within the overweight range of individuals, while average child BMI percentile (M = 66.36; SD = 32.29) was within the healthy weight range. The majority of participants were mothers (64.7% female) and Caucasian (79.0%). The average income of the sample was $62,648 (for participants that gave a range, the midpoint of this range was used in all analyses). See Table 1 for further descriptive statistics of the sample. Inclusion criteria included: 1) United States residency, 2) English fluency, and 3) at least one child between the ages of 7 and 17.

Procedure

Participants were parents/guardians recruited through MTurk and compensated $1.00 for their participation in a 30-minute survey. MTurk is a method used to recruit participants and collect data online, and this method has been previously used in assessing parental attitudes and practices (Kiefner-Burmeister, Hoffmann, Meers, Koball, & Musher-Eizenman, 2014; Musher-Eizenman, & Kiefner, 2013). It has been shown that MTurk participants are more diverse, recruited more rapidly, and the data is equally reliable compared to traditional methods of data collection (Buhrmester, Kwang, & Gosling, 2011). MTurk is free to join for researchers and participants, and invitations to participate (Human Intelligence Tasks; HITs) in the study are posted into the MTurk
online forum. Workers on MTurk have the opportunity to decide which HITs they would like to participate in. The HIT gives an overview of the study.

Participants were asked to answer all questions thinking of their oldest child within the 7-17 age range for consistency. Measures included six random validity check questions – (i.e. “Please select Agree,” “Select Strongly Agree if you live within the
United States”). Participants that did not choose the correct answers for all of the validity questions were excluded from the sample (20 participants). The Kent State IRB approved this study.

Measures

Demographics. The demographic measure developed for this study included 41-items concerning basic demographics characteristics of both the parent and child (e.g., age, gender, education, income). Parents reported their own and their child’s height and weight. Parent height and weight were used to calculate BMI (kg/m2). Child height and weight was used to calculate BMI percentile for age and gender using CDC (Center for Disease Control) guidelines (Kuczmarski et al., 2000). BMI percentiles compare children and adolescents to the CDC BMI-for-age growth charts (by gender), and are more accurate for children and teens than BMI (Flegal & Ogden, 2011).

Time Demands Questionnaire. The Time Demands Questionnaire (TDQ) is a 9-item measure of family stressors related to time demands surrounding mealtime (Lytle et al., 2011). Each item is rated on a Likert scale from 1 (Strongly Disagree) to 4 (Strongly Agree). Example items include, “I feel too busy with work or other demands,” and “If I was less busy I would be happier.” Two items are reverse coded, with higher total scores indicating higher levels of time demands related to family mealtime. Consistent with previous research (Lytle et al., 2011), this study found good reliability for the Time Demands Questionnaire (α = .89).

Core Food Security Module. The USDA Core Food Security Module is a validated scaled measurement of the severity of household food insecurity and hunger
within the past 12 months (Bickel, Nord, Price, Hamilton & Cook, 2000). Example items include, “In the last 12 months, the food that we bought just didn’t last and we didn’t have money to get more,” and “The children were not eating enough because we just couldn’t afford enough food.” The responses to this 18-item food security scale were used to calculate the 12-month food security scale. Higher scores indicate higher levels of food insecurity.

**Weight Control Strategies Scale.** The Weight Control Strategies Scale (WCSS) is a 30-item validated self-report measure of weight control behaviors (Pinto, Fava, Raynor, LaRose, & Wing, 2013). Each item is rated on a Likert scale from 0 (never) to 4 (always). Example items include: “I limited my intake of regular soda,” and “I scheduled exercise into my day.” This measure exhibited good reliability in the current sample (α = .95), consistent with previous research (Pinto et al., 2013).

**Healthy Habits Assessment.** The Healthy Habits Assessment is a 6-item measure that asks about a variety of children’s healthy habits reflective of the currently American Academy of Pediatrics Guidelines (Children’s Healthcare of Atlanta, 2013; Rogers & Motyka, 2009). These items assess current levels of fruits and vegetables consumed, eating out, activity/sedentary levels, sugar sweetened beverage consumption and motivation for healthy habits changes. Each item is scored on a scale from 1 (lower levels of healthy habit) to 4 (high levels of healthy habit). A total score of the 6 items was created by summing the scores from each question, with higher scores indicating higher levels of healthy habits.
Acceptance and Action Questionnaire – II (AAQ-II). The AAQ-II (Bond et al., 2011) is a 7-item measure of psychological flexibility. Items (e.g. “Emotions cause problems in my life”) are rated on a scale from 1 (never true) to 7 (always true). Higher scores on this measure indicate higher levels of psychological inflexibility. Consistent with previous research (Bond et al., 2011) this measure exhibited good reliability in the present sample ($\alpha = .93$).

Barriers to a Healthy Family Lifestyle questionnaire (BHFL). Barriers to a Healthy Family Lifestyle was developed to assess barriers to maintenance of a healthy child weight within the family context. For phase I of measure construction, experts in pediatric obesity and weight management (e.g., doctoral level psychologists within multidisciplinary pediatric weight management clinics in multiple U.S. locations) were asked to identify domains they perceive as barriers to a healthy family lifestyle that impact child weight management. A review of relevant literature to identify barriers in maintaining a healthy family lifestyle in clinical and community samples was also conducted. Correlates of BMI (e.g., fast food consumption), which may serve as barriers in families, were also identified through an extensive literature review. Finally, barriers to adherence in other pediatric populations (i.e. asthma, diabetes) were examined via literature search, as adherence to medication in these pediatric population parallels maintenance of healthy behaviors within pediatric weight management. Studies published in English were identified through literature searches on PubMed, Google Scholar, and PsycINFO using search terms related to healthy weight management in the family (e.g. pediatric, obesity, BMI, diabetes, asthma, adherence, barriers, weight).
reference sections of all relevant articles were examined for factors related to adherence and barriers in pediatric healthy weight and chronic illness. Constructs identified included parental and family emotional support for physical activity and healthy eating, characteristics of the built environment, such as limited access to safe places for exercise, and financial barriers to healthy food and exercise equipment, child and family motivation to maintain a healthy lifestyle, and time demands.

Phase 2 of measure construction consisted of writing sample items to measure the identified constructs. Experts in pediatric weight management were again contacted with a list of relevant constructs, as well as initial items written to tap these constructs. Items were written to tap constructs of motivation (e.g., I feel motivated to keep healthy foods at home), financial access (e.g., In our house, decisions about what to eat are based on cost), family support for healthy eating (e.g., I talk to my child about how to make healthy eating choices) and exercise (e.g., Our whole family participates in physical activity together), built environment access (e.g., Our neighborhood is a safe place to walk or play) and parental time demands (e.g., It is hard for me to find the time to prepare healthy food at home). Experts provided feedback on the items written and were asked to provide additional items related to the relevant constructs.

Based on Phases I and II, the initial measure consisted of 41-items. Please see Table 2 for a list of all items included. Instructions stated, “The following is a list of items that are related to eating and exercise habits within your family environment. For each item please indicate how much you believe it applies to your family.” As with initial survey instructions, parents were asked to answer all items with respect to their
oldest child within the 7-17 age range. Items were rated on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

**Data Analysis**

A split-half of the sample was used to conduct an exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) to allow for validation of the factor structure. This was conducted by randomly assigning approximately half of participants into one of two subsamples using SPSS. The first subsample was used in EFA ($N = 410$) procedures to identify the underlying factor structure of the items. The CFA ($N = 402$) procedure was used in the second subsample to confirm the factor structure identified by EFA. This procedure has been used in previous measure development (Nelson, Benson, & Jenson, 2010). There were no significant differences between these participants in the EFA and CFA subsamples on gender of parent or child, age of the parent or child, parent BMI, child BMI percentile, or income.

**Exploratory factor analysis and confirmatory factor analysis.** EFA was conducted using principle axis factoring with Promax rotation, and parallel analysis was conducted to determine the number of factors to extract (Reise, Waller, & Comrey, 2000). Previous data suggests that parallel analysis is the most accurate approach to extracting factors from EFA, compared to eigenvalues and scree plot examination (Hayton Allen, & Scarpello, 2004; Henson & Roberts, 2006). CFA was conducted using MPlus software (Muthen & Muthen, 2012). As the $\chi^2$ statistic is highly sensitive to sample size (Kline, 2005), alternative fit statistics, were used to examine model fit within CFA. Consistent with Hu and Bentler (1999), the standardized root mean square residual
(SRMR) and two other indices were used to test if the model fit reasonably well: the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). SRMR values <.10 are generally considered acceptable and <.08 are considered good (Hu & Bentler, 1999). CFI values range from 0 to 1 with .9 representing adequate model fit (Bollen, 1989). RMSEA is considered good at <.05, acceptable at .05-.08 and marginal at .08-.10 (Hu & Bentler, 1999).

**Preliminary reliability and validity.** To determine internal consistency of each scale, alpha coefficients were calculated for each BHFL subscale and the total scale. In order to establish preliminary convergent validity, Pearson Correlations between each subscale and a previously validated, theoretically related constructs (e.g. food security, health habits) were examined within the CFA subsample. It was expected that theoretically related constructs would be related, showing convergent validity. In order to test discriminant validity, Pearson Correlations between each subscale and a theoretically unrelated measure were examined. Fisher’s z-transformation comparisons were also used to compare the size of correlations (Fisher, 1921), given that the large sample size increases the likelihood of significant correlations. Therefore, the Fisher’s z-score comparison was used to examine discriminant validity, with theoretically related constructs being related to each other more highly than they are related to other constructs (Lehmann, 1988).
Results

Exploratory Factor Analysis

A preliminary EFA was conducted using principle axis factoring and oblique rotation (promax) of the 41-item measure. Using parallel analysis, six factors emerged. A second EFA was run, constraining the data to six factors. One item loaded onto multiple scales with a loading of .4 or greater and was dropped from the measure due to lack of specificity (Matsunaga, 2010).

A subsequent EFA was conducted without this item. Please see Table 2 for the factor loadings after rotation. Items that did not load onto any subscale at .4 or above were dropped from the measure (10 items; Costello & Osborne, 2005) resulting in a total of 30 items. One scale retained only two-items, decreasing the clinical utility of the subscale and that 2-item subscale was dropped. There were five subscales left with a total of 28 items. The five-factor solution accounted for 48.6% of the variance. Subscale one retained 6 items related to parental encouragement (accounting for 26.0% of the variance), subscale two retained 7 items related to cost concerns (8.7% of the variance), subscale three retained 5 items related to family support (6.2% of the variance), subscale four retained 6 items related to time concerns (4.3% of the variance), and subscale five retained 4 items related to unhealthy food choices, such as junk food and fast food consumption (3.4% of the variance).

Confirmatory Factor Analysis

An initial CFA was conducted on the remaining 28 items to cross-validate the five-factor solution obtained via the previous EFA within the second subsample. Items
that did not have a standardized loading of at least .4 on their respective factor were removed from subsequent analyses (6 items). After these items were dropped one subscale retained only two items. This subscale was deleted due to lack of clinical utility, leaving a total of 26 items. A second CFA was conducted to examine the remaining four-factor structure. The chi-squared value for the overall model was $X^2 (146) = 447.71$, $p < .001$, suggesting a lack of fit for the model tested. In addition, examination of alternative fit indices did not show acceptable fit of the model, as CFI = .87, RMSEA = .07, SRMR = .06.

Modification indices suggested that correlating the error terms for some items would increase model fit. Thus, three model respecifications were made after examining the modification indices. Specifically, the error terms of the following items were correlated: 1) items 26 (“Our family eats dinner at a similar time and in the same place most nights”) and 15 (“Our family is too busy to eat meals together”) were correlated, 2) items 23 (“Having a gym membership is too expensive in our family”) and 1 (“Our whole family participates in physical activity together”), and 3) items 14 (“I compliment my child when he/she makes healthy choices”) and 12 (“I praise my child for physical activity”). These modifications were appropriate statistically and were also appropriate from a conceptual standpoint. As the subscale domains are conceptually related (i.e. each subscale taps barriers to healthy habits within the family), it is logical that theoretically the error terms for some items are related. Model respecifications do not alter the factor structure of the model, rather accounts for similarity in item response patterns for these items.
Table 2

**Factor loadings of items onto six factors of Barriers to a Healthy Family Lifestyle.**

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
<th>Factor 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>I compliment my child when he/she exercises.</td>
<td>.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I praise my child for physical activity.</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I compliment my child when he/she makes healthy eating choices.</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I talk to my child about different ways to get more physical activity</td>
<td>.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I encourage my child to exercise regularly.</td>
<td>.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I talk to my child about how to make healthy eating choices.</td>
<td>.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If my family had more money my child could eat healthier foods.</td>
<td></td>
<td>.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extracurricular sports are too expensive for my child to participate.</td>
<td></td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In our house, decisions about what to eat are based on cost.</td>
<td></td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having a gym membership is too expensive for our family.</td>
<td></td>
<td>.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruits and vegetables are too expensive for our family to buy.</td>
<td></td>
<td>.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our family always has enough food to eat.</td>
<td></td>
<td></td>
<td>.53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are recreational facilities available to my child (e.g. basketball court, gym, park).</td>
<td></td>
<td></td>
<td></td>
<td>.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My child has places to exercise when the weather is poor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>There is a park within walking distance of our home.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.56</td>
</tr>
<tr>
<td>Our neighborhood is a safe place to play.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our whole family participates in physical activity together.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.71</td>
</tr>
<tr>
<td>Our family makes an effort to eat healthy foods.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.69</td>
</tr>
<tr>
<td>When our family goes to restaurants we try to make healthy choices.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.56</td>
</tr>
<tr>
<td>Our family does not focus on being healthy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being healthy is important in our family.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel motivated to keep my family be healthy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel motivated to keep healthy foods at home.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usual social activities in our family do not include exercise.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I eat fruits and vegetables in front of my child.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our family is too busy to eat meals together.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.78</td>
</tr>
<tr>
<td>It is hard for me to find the time to prepare healthy food at home.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.74</td>
</tr>
<tr>
<td>It is hard for my family to find the time for physical activity.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.57</td>
</tr>
</tbody>
</table>

\(^a\) Correlation is significant at the .05 level.
A final CFA model was tested following model respecification and this model was found to have an acceptable fit, $\chi^2(143) = 358.12$, $p < .001$, CFI = .91, RMSEA = .06, SRMR = .06. Given the improved fit of the model, this model allowing the error terms to covary was considered the better model. This final model consisted of 4 factors with 19 items total: Parental Encouragement (5 items), Cost and Built Environment (5 items), Family Support (4 items), and Family Time Constraints (5 items). See italicized items in Table 2 for items included in the final measure.
Preliminary Reliability and Validity

Preliminary reliability. Alpha reliability for each of the subscales fell in the acceptable to good range: Parental Encouragement $\alpha = .84$, Cost and Built Environment $\alpha = .77$, Family Support $\alpha = .69$, and Family Time Constraints $\alpha = .78$. Alpha reliability of the total score was good ($\alpha = .85$). While coefficients of .7 or greater are recommended (Nunally & Bernstein, 1994), previous literature has suggested that coefficients of .6 or greater are acceptable for newly developed scales (Ware et al., 1980).

Preliminary Validity.

Analytic strategy. In order to assess the convergent validity of the BHFL total score, as well as each subscale, the scales that emerged were correlated with theoretically related, previously validated measures. The BHFL total score was examined in relation to the Health Habits Assessment, as a measure of the habits that currently exist within the family. The Cost and Build Environment BHFL subscale was examined in relation to the USDA Core Foods Security Module (Bickel et al., 2000), as this is an indicator of food insecurity related to the costs associated with food. It was expected that these would be positively related, with higher levels of cost and build environment barriers related to higher levels of food insecurity. Finally, the relationship between the Family Time Constraints subscale and the Time Demands Questionnaire (TDQ; Lytle et al., 2011) was examined, as this is a measure of time demands placed on the parent broadly, with some specificity to eating and exercise. It was also expected that these measures would be positively correlated, with higher levels of time barriers related to more time demands in the family. The Parental Encouragement and Family Support subscales were examined
in relation to the Weight Control Strategies Scale (WCSS; Pinto et al., 2013), with an expected negative correlation, such that higher levels of barriers concerning parental encouragement and family support were related to fewer weight control strategies. Parental modeling of healthy behaviors, as measured by the WCSS, may be an indicator of how often those behaviors occur within the family. Additionally, convergent validity for the Cost and Built Environment subscale was established by comparing scores on this subscale between families above the median household income in the U.S. to families below the median income in the U.S. It was expected that families below the median income in the U.S. would have higher levels of cost and built environment barriers.

In order to establish discriminant validity the relationship between each BHFL subscale and the total score were correlated with the Acceptance and Action Questionnaire, a theoretically less related construct measuring psychological inflexibility. Subsequently, Fisher’s Z comparisons were used to compare the strength of correlations. The size of the correlation between the BHFL scale and related previously validated scale was compared to the size of the correlation between the BHFL scale and the Acceptance and Action Questionnaire.

Convergent validity. Please see Table 3 for all correlations related to validity. These correlations were conducted within the CFA split-half of the sample. The BHFL total score was significantly related to the Healthy Habits Assessment, such that higher levels of barriers were related to lower levels of healthy habits within the family. The Family Time Constraints BHFL subscale was significantly related to the Time Demands Questionnaire, such that higher levels of time demands were related to higher levels of
time constraints related to eating and exercise within the family. Cost and Built Environment barriers were significantly related to the Core Foods Security Module, such that individuals with higher barriers related to cost and the environment have higher levels of food insecurity. Scores on the Cost and Built Environment Barriers subscale were also compared between families above and below the median household income ($52,250) in the U.S., with individuals below the median household income endorsing significantly higher levels of cost and built environment barriers ($M = 2.99, SD = .82$) than individuals above the median household income ($M = 2.47, SD = .69$), $t(390) = 6.74, p < .000$. Both the Parental Encouragement and Family Support subscales were related to the Weight Control Strategies Scale, such that higher scores on Parental Encouragement and Family Support subscales (indicating higher levels of barriers) were related to less parental weight control strategies.

Discriminant validity. Contrary to expected findings, all BHFL subscales were significantly related to the Acceptance and Action Questionnaire. However, due to the large sample size within the present study, and the interrelated constructs measured by the BHFL it may make more sense to compare the magnitude of the relationships between theoretically related constructs and less related constructs. This was done using Fisher’s $z$-score comparisons.

Fisher’s $z$-score comparisons were conducted to examine the relationship between BHFL subscales and theoretically related measures, as compared to the magnitude of the relationship between BHFL subscales and a less theoretically related measure (AAQ-II). This comparison was used to show that the correlation between the Parental
Encouragement subscale and the Weight Control Strategies total score was significantly stronger than the relationship between the Parental Encouragement subscale and the AAQ-II (Fisher’s Z = 2.1, \( p < .05 \)). As expected, the relationship between the Family Support subscale and the Weight Control Strategies Scale was significantly stronger than the relationship between the Family Support subscale and the AAQ-II (Fisher’s Z = 4.17, \( p < .05 \)). Also as expected, the relationship between the Cost and Built Environment subscale and the Core Food Security Module was stronger than the relationship between the Cost and Built Environment subscale and the AAQ-II (Fisher’s Z = 3.22, \( p < .05 \)). Finally, the correlation between the Family Time Constraints subscale and the Time Demands Questionnaire was significantly stronger than the relationship between the Family Time Constraints subscale and the AAQ-II (Fisher’s Z = 5.98, \( p < .05 \)).

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parental Encouragement</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Cost and Built Environment</td>
<td>.14</td>
<td>.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Family Support</td>
<td>.40</td>
<td>.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Family Time Constraints</td>
<td>.25</td>
<td>.48</td>
<td>.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Barriers to Healthy Weight in the Family</td>
<td>.61</td>
<td>.73</td>
<td>.74</td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Weight Control Strategies Scale</td>
<td>-.33</td>
<td>-.25</td>
<td>-.48</td>
<td>-.32</td>
<td>-.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Core Food Security Module</td>
<td>.06</td>
<td>.62</td>
<td>.88</td>
<td>.27</td>
<td>.47</td>
<td>-.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Time Demands Questionnaire</td>
<td>.11</td>
<td>.39</td>
<td>.88</td>
<td>.54</td>
<td>-.09</td>
<td>.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Healthy Habits</td>
<td>-.36</td>
<td>-.25</td>
<td>-.56</td>
<td>-.33</td>
<td>-.44</td>
<td>.41</td>
<td>-.21</td>
<td>-.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Acceptance and Action Questionnaire - II</td>
<td>.10</td>
<td>.37</td>
<td>.22</td>
<td>.38</td>
<td>.42</td>
<td>-.02</td>
<td>.35</td>
<td>.41</td>
<td>-.23</td>
<td></td>
</tr>
<tr>
<td>11. Child BMI Percentile</td>
<td>.01</td>
<td>.08</td>
<td>.06</td>
<td>.05</td>
<td>.07</td>
<td>.06</td>
<td>.10</td>
<td>.08</td>
<td>.09</td>
<td>-.11</td>
</tr>
</tbody>
</table>

*Subscales of Barriers to Healthy Weight in the Family
\( *p < .05 \)  \( **p < .01 \)
Discussion

The present study builds upon prior research by developing a quantitative measure of parent-report barriers to healthy weight within the family. While previous measures have examined barriers to physical activity specific to overweight children (Zabinski et al., 2006), this is the first measure, to our knowledge, addressing barriers to healthy weight within the family context in a normative sample. This measure expands upon previous literature, which has taken a qualitative approach to examining barriers to weight loss by developing a broadly applicable quantitative measure of barriers to a healthy family lifestyle. Barriers have previously been shown to be important and related to health outcomes within the context of other pediatric chronic illnesses such as asthma and diabetes (Drotar & Bonner, 2009; Gellar et al., 2007; Mansour et al., 2000; Modi & Quittner, 2006 Mulvaney et al., 2006).

Overall BHFL Structure

An iterative process involving first EFA and then CFA was followed in the process of measure construction. The final 19-item BHFL measure consisted of four subscales and a total score. Findings from CFA suggested an overall acceptable fit of this four-factor structure. The subscales were labeled: Parental Encouragement, Cost and the Built Environment, Family Support and Family Time Constraints. The Parental Encouragement subscale reflects the extent to which a parent is encouraging of their child’s healthy behaviors. For example, one of the items on this subscale samples the extent to which parents encourage their child to engage in physical activity. The second subscale, Family Support, is similar in that it samples family member behavior but
different in that it measures the extent to which the entire family makes healthy choices together (e.g. family exercises together). Cost and the Built Environment are often related, and both loaded onto the same subscale during the development of the BHFL scale. Cost and environmental factors often overlap, as it is more likely that low-income individuals will face barriers related to the cost of foods or food insecurity (Casey, Szeto, Lensing, Bogle, & Weber, 2001), and environmental factors, such as safe places to play, are less likely in low-income areas (Sallis & Glanz, 2006). The final barriers subscale that emerged was Family Time Constraints. Previous research has found that there are more time demands surrounding mealtime in families with overweight parents (Lytle et al., 2011). Parents facing higher levels of time constraints may be less likely to help their child prepare healthy meals (Geller et al., 2007), encourage exercise, or monitor their children’s behaviors, possibly serving as a barrier to a healthy lifestyle in children.

**Measure Validation**

Preliminary findings from this initial measure development study suggest that the BHFL has acceptable psychometric properties, including good internal reliability and convergent validity. Internal consistency reliability for the total BHFL scale was good, and the four of the BHFL subscales showed acceptable to good internal consistency. In this study the BHFL Total Score showed convergent validity in that higher levels of barriers in the family were associated with lowered levels of healthy habits (e.g., screen time, fruit and vegetable consumption). This finding is notable in that, to the author’s knowledge, this is the first research to show that parents’ perceptions of barriers to a healthy family lifestyle are directly related to implementation of weight management
habits. Further, this finding builds upon previous pediatric health research showing that perceived barriers within other populations are related to specific health outcomes, such as medication adherence in asthma (Yoos, Kitzman, & McCullen, 2003).

Subscales of the BHFL measure also demonstrated initial convergent validity. Both the Parental Encouragement and Family Support subscales were related to the Weight Control Strategies Scale in an expected manner. While these subscales are similar in that they focus around engagement of the family system, the Parental Encouragement subscale focuses on the lack of parent-specific engagement in promotion of healthy behaviors, while the Family Support subscale focuses on behaviors of the family as a whole. For example, parental encouragement and involvement of specific health behaviors are specifically used within behavioral weight control treatment to effectively reinforce those health behaviors (Dalton & Kitzmann, 2012). Family focused treatment and involvement of the entire family structure in interventions for pediatric obesity have led to effective weight loss in children (Chesla, 2010; Dalton & Kitzmann, 2008). Parental modeling of effective weight control strategies (e.g. scheduling time for exercise) within the family is related to higher levels of parental encouragement of healthy behaviors (Stucky-Ropp & DiLorenzo, 1993), as well as support of the family as a whole to engage in healthy behaviors. In future research, convergent validity for the Parental Encouragement and Family support subscales should be further established by more proximal, theoretically related measures. The Family Time Constraints subscale of BHFL was significantly positively related to the Time Demands Questionnaire, as expected, with individuals reported less time availability also reporting time as a
consistent barrier to healthy weight management in the family, consistent with previous research in adults (Welch, McNaughton, Hunter, Hume & Crawford, 2009). The Cost and Built Environment subscale of the BHFL measure was significantly related to food insecurity, such that individuals endorsing higher levels of food insecurity reported facing more barriers related to cost of food and exercise equipment, as well as limited access to safe places for exercise. Limited access to safe places for exercise, as well as food insecurity, may be more common among low-income families (Casey et al., 2001; Sallis & Glanz, 2009). Similarly, parents from families under the median income in the U.S. were more likely to endorse higher levels of cost and built environment barriers.

Contrary to our expectation, BHFL subscales were all related to the discriminant measure, which assessed psychological inflexibility. This may have been due to the large sample size in the current study, however this may also be due to true differences such that individuals with higher levels of psychological inflexibility perceive more barriers to healthy weight management in the family. Thus, further comparisons were conducted in order to further examine discriminant validity. All BHFL subscales were more strongly related to the similar constructs used for convergent validity, than they were related to psychological inflexibility, a more peripheral construct. This shows preliminary evidence for discriminant validity, however additional research is needed to further establish discriminant validity of the BHFL.

**Potential for clinical utility.** Addressing barriers to a healthy lifestyle within the family may be helpful in preventing child weight gain and can also be used as a tool for weight management intervention in children. This measure is broadly applicable to
families and children of all weight statuses. In clinical settings, this can be used to address barriers to maintenance of a healthy weight status, or barriers to child weight control. Incorporating a quantitative measure in conjunction with clinical interviews can more rapidly identify barriers that may be present within the family and then addressed by the provider.

Limitations

While the development of the BHFL shows encouraging findings, several methodological issues should be taken into account. First, data for the present study was collected using a normative sample, and in the future should be examined across various populations with further examinations of the factor structure. While healthy weight maintenance is important in all families, these barriers may occur more frequently in families seeking clinical intervention for weight management. Future studies should examine the clinical utility of the BHFL measure within a treatment seeking population.

Secondly, the present study did not examine differences in these barriers among different racial and ethnic groups. While the present study included a broad range of income level, it may be the case that different cultural values affect specific subscales. For example, families from a collectivistic culture may be more likely to have family support. The factor structure of the BHFL measure should be examined in multiple cultures in order to understand the barriers that exist within different cultures.

A further limitation of the study was the use of a split-half methodology for validating the factor structure of the BHFL measure. This methodology limits generalizability as only one sample was collected. The factor structure of BHFL should
be examined in future samples. Additionally, the study methodology was cross-sectional, limiting the ability to estimate the predictive validity of the current study. Finally, the present study was a single-informant study. Children and adolescents may have differing perceptions of the barriers that they face in maintaining a healthy lifestyle. It may also be the case that barriers identified by clinicians (e.g. depression) may not be identified by the parent as a barrier. Multi-method and multi-informant studies are needed in order to fully understand the differences in perceptions of barriers from each perspective. Also a result of the single-informant methodology, parent report of child height and weight was employed. Many parents have inaccurate perceptions of their children’s weight (Eckstein et al., 2006), and as such analyses related to child BMI percentile should be interpreted with caution.

**Future Directions**

Overall, this study developed a quantitative measure of barriers to a healthy family lifestyle that can be used in clinical and research settings. This measure could be integrated into clinical settings to clearly and rapidly identify barriers that families face in creating or maintaining a healthy lifestyle. The present study is an important step in development of this measure to examine the barriers that may prevent families from maintaining a healthy lifestyle. Future research should aim to further develop this measure in other areas. For example, this measure could be examined in both a separate normative sample, as well as within a clinical population, as this measure is designed to be applicable to all families. Within a clinical population, this measure should also be integrated to more clearly and rapidly understand the barriers to a healthy family lifestyle,
with targets for intervention based upon different barriers identified. Finally, this measure can be employed in longitudinal studies examining whether barriers predict treatment outcomes or obesity risk using objective measures.
References


practices, family stressors, and the weight of youth in the family. *Annals of Behavioral Medicine, 41*, 353-362. DOI:10.1007/s12160-010-9243-z


Turrell, G., Hewitt, B., Patterson, C., Oldenburg, B. & Gould, T. (2002). Socioeconomic differences in food purchasing behaviour and suggested implications for diet-


Appendix A. Demographics Questionnaire

Screening Questions

1. Is English your primary language? Yes
   No

2. Are you the parent/guardian of at least one child between 7 and 17 who lives with you at least 50% of the time? Yes
   No

If you have more than one child between the ages of 7 and 17, please answer all questions while thinking about the oldest child within that age range.

Parental Biographical Information

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>What is your gender? <em>(Please circle one)</em></td>
</tr>
<tr>
<td></td>
<td>1 = Male  2 = Female</td>
</tr>
<tr>
<td>2.</td>
<td>What is your age in years?</td>
</tr>
<tr>
<td></td>
<td>________ years</td>
</tr>
<tr>
<td>3.</td>
<td>When were you born?</td>
</tr>
<tr>
<td></td>
<td>_____ (mm) (dd) _____ (yyy)</td>
</tr>
<tr>
<td>4.</td>
<td>What is your marital status? <em>(Please circle one)</em></td>
</tr>
<tr>
<td></td>
<td>1 = Single  2 = Married  3 = Divorced  4 = Widowed  5 = Other: ____________________________</td>
</tr>
<tr>
<td>5.</td>
<td>Which of the following do you consider to be your racial group? <em>(Please circle all that apply)</em></td>
</tr>
<tr>
<td></td>
<td>1 = American Indian/Alaskan Native  2 = Asian  3 = Native Hawaiian or Other Pacific Islander  4 = Black or African American  5 = White or Caucasian  6 = More than one race <em>(Please describe):__________________________________________</em>  7 = Other <em>(Please describe):__________________________________________</em>  8 = Do not know</td>
</tr>
</tbody>
</table>
6. Which of the following do you consider to be your ethnic group?

<table>
<thead>
<tr>
<th></th>
<th>1 = Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 = Not Hispanic or Latino</td>
</tr>
</tbody>
</table>

**Parental Employment/Education History**

7. Circle the answer that best describes your family structure:

<table>
<thead>
<tr>
<th></th>
<th>1 = Single Parent (never married, divorced, widowed, or separated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 = Partnered (married or living with partner)</td>
</tr>
</tbody>
</table>

8. Are you currently employed?

<table>
<thead>
<tr>
<th></th>
<th>1 = Homemaker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 = No</td>
</tr>
<tr>
<td></td>
<td>3 = Yes (answer 10a – 10c)</td>
</tr>
</tbody>
</table>

10a. If yes, what is your usual occupation?

10b. What is your current occupation?

10c. Circle whether you work…

<table>
<thead>
<tr>
<th></th>
<th>1 = Part Time (less than 30 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 = Full Time (more than 30 hours)</td>
</tr>
</tbody>
</table>

9. On average, how many hours per week do you work?

10. Is your spouse, partner, or significant other employed?

<table>
<thead>
<tr>
<th></th>
<th>1 = Homemaker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 = No</td>
</tr>
<tr>
<td></td>
<td>3 = Yes (answer 12a – 12c)</td>
</tr>
<tr>
<td></td>
<td>4 = N/A</td>
</tr>
</tbody>
</table>

12a. If yes, what is his/her usual occupation?

12b. If yes, what is his/her current occupation?

12c. Circle whether he/she works…

<table>
<thead>
<tr>
<th></th>
<th>1 = Part Time (less than 30 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 = Full Time (more than 30 hours)</td>
</tr>
<tr>
<td>Question</td>
<td>Options</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>11. Are you enrolled in school now?</td>
<td>1 = No  <strong>Skip to Question 17</strong>  2 = Yes</td>
</tr>
<tr>
<td>12. If yes, are you enrolled as a full-time or part-time student?</td>
<td>1 = Part-time  2 = Full-time</td>
</tr>
<tr>
<td>13. What school are you enrolled in?</td>
<td>Type of school/program:</td>
</tr>
<tr>
<td></td>
<td>Current year/level in school:</td>
</tr>
<tr>
<td>14. What is the highest grade you have completed? (Circle highest grade completed)</td>
<td>Grade:  1  2  3  4  5  6  7  8  9  10  11  12  OR</td>
</tr>
<tr>
<td></td>
<td>Completed College Year: Freshman  Sophomore  Junior  Senior</td>
</tr>
<tr>
<td>16a. If you completed college, please circle your completed degree:</td>
<td>1 = Technical/Trade  2 = Bachelors  3 = Masters or higher  4 = Other degree: ____________________</td>
</tr>
<tr>
<td>15. Is your partner enrolled in school now?</td>
<td>1 = No  <strong>Skip to Question 20</strong>  2 = Yes  3 = Not applicable (skip to question 20)</td>
</tr>
<tr>
<td>16. If yes, is he/she enrolled as a full-time or part-time student?</td>
<td>1 = Part-time  2 = Full-time</td>
</tr>
<tr>
<td>17. What school is he/she enrolled in?</td>
<td>Type of school/program:</td>
</tr>
<tr>
<td></td>
<td>Current level/year:</td>
</tr>
</tbody>
</table>
18. What is the highest grade your spouse/significant other/partner has completed?  
(Circle highest grade completed)  
Grade:  
1  2  3  4  5  6  7  8  9  10  11  12  
OR  
Completed College Year:  
Freshman  Sophomore  Junior  Senior

20a. If your spouse/partner/significant other has completed college, please circle their completed degree:  
1 = Technical/Trade  
2 = Bachelors  
3 = Masters or higher  
4 = Other degree: _______________________

19. What is your approximate weight?  

20. What is your approximate height?  

**Family Financial History**

21. What is the total income in your household for the year, before taxes, including ALL sources?  
Please write-in the amount below and circle the category that matches:  

$_______________  

(Circle one)  
0 = < $5000  
1 = $5,000-9,999  
2 = $10,000-14,999  
3 = $15,000-19,999  
4 = $20,000-24,999  
5 = $25,000-29,999  
6 = $30,000-34,999  
7 = $35,000-39,999  
8 = $40,000-44,999  
9 = $45,000-49,999  
10 = $50,000-54,999  
11 = $55,000-59,999  
12 = $60,000-64,999  
13 = $65,000-69,999  
14 = $70,000-74,999  
15 = $75,000-79,999  
16 = $80,000-84,999  
17 = $85,000-89,999  
18 = $90,000-94,999  
19 = $95,000-99,999  
20 = >$100,000

23. Does the income stay the same month to month?  
1 = No  
2 = Yes  

If no, please describe:  
_________________________________________________________
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Does your family receive food stamps?</td>
<td>1 = No</td>
</tr>
<tr>
<td></td>
<td>2 = Yes</td>
</tr>
<tr>
<td>23. Does your family receive Medicaid?</td>
<td>1 = No</td>
</tr>
<tr>
<td></td>
<td>2 = Yes</td>
</tr>
<tr>
<td>24. Does your child receive free or reduced cost school lunch?</td>
<td>1 = No</td>
</tr>
<tr>
<td></td>
<td>2 = Yes</td>
</tr>
<tr>
<td>25. Does your family receive any other source of public assistance?</td>
<td>1 = No</td>
</tr>
<tr>
<td></td>
<td>2 = Yes</td>
</tr>
<tr>
<td>35a. If yes, describe:</td>
<td></td>
</tr>
<tr>
<td>26. What mode of transportation does your family typically rely upon?</td>
<td>1 = Personal car</td>
</tr>
<tr>
<td></td>
<td>2 = Public Transportation (bus,</td>
</tr>
<tr>
<td></td>
<td>subway, etc)</td>
</tr>
<tr>
<td></td>
<td>3 = Borrowed Car (car from a friend</td>
</tr>
<tr>
<td></td>
<td>or relative)</td>
</tr>
<tr>
<td></td>
<td>4 = Car pool</td>
</tr>
<tr>
<td></td>
<td>5 = Walking</td>
</tr>
<tr>
<td></td>
<td>6 = Riding personal bicycle</td>
</tr>
<tr>
<td></td>
<td>7 = Other:</td>
</tr>
<tr>
<td></td>
<td>__________________________________</td>
</tr>
<tr>
<td>27. How many times have you attempted to lose weight?</td>
<td></td>
</tr>
<tr>
<td>28. Your weight is currently:</td>
<td>1 = Underweight</td>
</tr>
<tr>
<td></td>
<td>2 = Normal Weight</td>
</tr>
<tr>
<td></td>
<td>3 = Overweight</td>
</tr>
<tr>
<td>29. Which of these methods have you used to lose weight? (Choose all that</td>
<td>1 = Organized Program in the community</td>
</tr>
<tr>
<td>apply)</td>
<td>(e.g. Weight Watchers)</td>
</tr>
<tr>
<td></td>
<td>2 = Organized program based out of</td>
</tr>
<tr>
<td></td>
<td>a hospital or doctor’s office</td>
</tr>
<tr>
<td></td>
<td>3 = Gym Membership</td>
</tr>
<tr>
<td></td>
<td>4 = Personal Training</td>
</tr>
<tr>
<td></td>
<td>5 = Pills/Medications</td>
</tr>
<tr>
<td></td>
<td>6 = Bariatric Surgery</td>
</tr>
<tr>
<td></td>
<td>7 = Self-monitoring</td>
</tr>
<tr>
<td></td>
<td>8 = Regular diet and exercise (no</td>
</tr>
<tr>
<td></td>
<td>specific program/technique)</td>
</tr>
</tbody>
</table>
### Child’s Demographic History

<table>
<thead>
<tr>
<th>Question</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. What is the gender of your child?</td>
<td></td>
</tr>
<tr>
<td>31. What is your child’s age?</td>
<td></td>
</tr>
<tr>
<td>32. What is your child’s date of birth?</td>
<td></td>
</tr>
</tbody>
</table>
| 33. Which of the following do you consider to be your child’s racial group? (Circle one) | 1 = American Indian/Alaskan Native  
2 = Asian  
3 = Native Hawaiian or Other Pacific Islander  
4 = Black or African American  
5 = White or Caucasian  
6 = More than one race  
(Please describe): ___________________________________________  
7 = Other (Please describe): ____________________________________  
8 = Do not know |
| 34. Which of the following do you consider to be your child’s ethnic group? (Circle one) | 1 = Hispanic or Latino  
2 = Not Hispanic or Latino |
<p>| 35. What grade is your child currently in?                               |                                                                                                   |
| 36. What is your child’s approximate height (in)?                        |                                                                                                   |
| 37. What is your child’s approximate weight (lbs)?                       |                                                                                                   |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| 38. Have any of these professionals ever told you that your child is overweight? (Choose all that apply) | 1 = Doctor/Pediatrician  
2 = School Nurse  
3 = Other:__________ |
| 39. Your child is currently: | 1 = Very Underweight  
2 = Underweight  
3 = Healthy Weight  
4 = Overweight  
5 = Very Overweight |
| 40. How many times has your child attempted to lose weight? | 1 = Organized Program in the community (e.g. Weight Watchers)  
2 = Organized program based out of a hospital or doctor’s office  
3 = Gym Membership  
4 = Personal Training  
5 = Pills/Medications  
6 = Bariatric Surgery  
7 = Self-monitoring  
8 = Regular diet and exercise (no specific program/technique)  
9 = Prepackaged meals (e.g. Slim Fast)  
10 = Other |

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Appendix B. Time Demands Questionnaire.

TDQ

To the following questions, please circle the number of the response that best describes how you feel. Use the following scale:

1 = Strongly Disagree
2 = Disagree
3 = Agree
4 = Strongly Agree

1. I feel too busy with work or other demands. ………………………………1 2 3 4
2. I often disappoint my children because I am too busy with work or other demands (for example, miss attending your child’s sport/school events)……1 2 3 4
3. I have a healthy balance between work, other demands on my time, and quality time for my family and myself …………………………………1 2 3 4
4. If I was less busy, I would be able to help my child make healthier food choices…………………………………………………………1 2 3 4
5. If I was less busy, I would be able to help my child be more physically active…………………………………………………………1 2 3 4
6. If I was less busy, I would be happier………………………………1 2 3 4
7. I am confident that I can find a healthy balance between work, other demands on my time and quality time for my family and myself……………………………1 2 3 4
8. If I was less busy, I would be able to eat a healthier diet………….1 2 3 4
9. If I was less busy, I would be able to be more physically active……1 2 3 4
Appendix C. USDA Core Food Security Module

Core Food Security Module

1. Which of these statements best describes the food eaten in your household in the last 12 months:

□ Enough of the kinds of foods we want to eat (SKIP to question #2)

□ Enough, but not always the kinds of food we want to eat (SKIP to question 1b)

□ Sometimes not enough to eat

□ Often not enough

1a. Below are some reasons why people don’t always have enough to eat. Please check each reason that applies to why you don’t always have enough to eat. If there is a reason that is not listed, please list it next to “Other”.

□ Not enough money for food

□ Too hard to get to the store

□ On a diet

□ No working stove available

□ Not able to cook or eat because of health problems

□ Other

____________________________________________________________________

1b. Below are some reasons why people don’t always have the kinds of food they want or need. Please check each reason why you don’t always have the kinds of food you want or need. If there is a reason that is not listed, please list it next to “Other”.

□ Not enough money for food

□ Too hard to get to the store

□ On a diet

□ Kinds of food we want not available

□ Good quality food not available

□ Other

____________________________________________________________________

Please answer if the following were often, sometimes, or never true for you by checking the appropriate box.

2. In the last 12 months, We worried whether our food would run out before we got money to buy more’.

□ often □ sometimes □ never □ don’t know
2a. How often did this happen in the last 30 days (1 month)?
□ often □ sometimes □ never □ don’t know

3. In the last 12 months, The food that we bought just didn’t last and we didn’t have money to get more’.
□ often □ sometimes □ never □ don’t know

4. ‘We couldn’t afford to eat balanced meals’.
□ often □ sometimes □ never □ don’t know

5. ‘We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food’.
□ often □ sometimes □ never □ don’t know

6. ‘We couldn’t feed our children a balanced meal, because we couldn’t afford that’.
□ often □ sometimes □ never □ don’t know

7. ‘The children were not eating enough because we just couldn’t afford enough food’.
□ often □ sometimes □ never □ don’t know

Please answer the following questions by checking the appropriate box.

8. In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn’t enough money for food?
□ Yes □ No □ Don’t Know

8a. If you answered yes to question 7 above: How often did this happen?
□ almost every month □ some months but not every month □ in only 1 or 2 months □ don’t know

9. In the last 12 months, did you ever eat less than you felt you should because there wasn’t enough money for food?
□ Yes □ No □ Don’t Know

10. In the last 12 months, were you ever hungry, but didn’t eat, because you couldn’t afford enough food?
□ Yes □ No □ Don’t Know

11. In the last 12 months, did you lose weight because you didn’t have enough money for food?
□ Yes □ No □ Don’t Know
12. In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn’t enough money for food?
   □ Yes □ No □ Don’t Know

12a. If you answered yes to question 12 above: How often did this happen?
   □ almost every month □ some months but not every month □ in only 1 or 2 months
   □ don’t know

13. In the last 12 months, did you ever cut the size of any of the children’s meals because there wasn’t enough money for food?
   □ Yes □ No □ Don’t Know

14. In the last 12 months, did any of the children ever skip meals because there wasn’t enough money for food?
   □ Yes □ No □ Don’t Know

14a. If you answered yes to question 14 above: How often did this happen?
   □ almost every month □ some months but not every month □ in only 1 or 2 months
   □ don’t know

15. In the last 12 months, were the children ever hungry but you just couldn’t afford more food?
   □ Yes □ No □ Don’t Know

16. In the last 12 months did any of the children ever not eat for a whole day because there wasn’t enough money for food?
   □ Yes □ No □ Don’t Know
Appendix D. Weight Control Strategies Scale

WCSS

Instructions: The following statements describe strategies and behaviors that individuals may engage in when they are trying to lose weight or maintain their weight loss. Using the scale below, circle the number that best describes how often you did each of the following during the past month. Please respond to every item.

0 = Never
1 = Occasionally
2 = About half the time
3 = Most of the time
4 = Always

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Never</th>
<th>Occasionally</th>
<th>About half the time</th>
<th>Most of the time</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I set a daily calorie goal for myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>I had several servings of fruits and/or vegetables each day.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>I kept a record of the type and amount of food I ate.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>I set exercise goals for myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>If I overate, I thought about what led up to my overeating.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>I kept high calorie, high fat foods (e.g., chips, cookies, cakes) out of sight so they would not tempt me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>I avoided fried foods.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>I had a plan for getting my exercise in if the weather was bad and I couldn't exercise outside.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>If I overate on one day, I made up for it by eating less the next day.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>I kept low-calorie foods (e.g., fruit, raw vegetables, unbuttered popcorn) accessible for a healthy snack.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>I engaged in moderate-intensity exercise like brisk walking or something similar to brisk walking for at least 30 minutes a day</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>I weighed and/or measured the foods I ate.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>I limited my intake of regular soda.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>Occasionally</td>
<td>About half the time</td>
<td>Most of the time</td>
<td>Always</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-------</td>
<td>--------------</td>
<td>---------------------</td>
<td>-----------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>14. When I reached my calorie goal for the day but still felt hungry, I tried a pleasant activity to take my mind off of the hunger.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>15. I kept a record of the calories and fat in the foods I ate.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>16. I kept a record of my minutes of exercise.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>17. I ate lower-fat meats (e.g., chicken, turkey, fish) or meat substitutes (e.g., lentils).</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>18. If I got off track with my eating or exercise, I encouraged myself by thinking positively.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>19. When eating dairy products (e.g., milk, yogurt, cheese), I chose reduced fat or fat-free options.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>20. When I met a goal related to my eating, exercise, or weight loss, I rewarded myself with something special that did not involve food.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>21. I ate meats, fish, or vegetables that were baked, broiled, or grilled.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>22. If I missed exercising on one day, I made up for it by exercising longer another day.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>23. I weighed myself daily.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>24. I scheduled exercise into my day.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>25. If I had negative thoughts about my weight loss progress, I tried to catch myself and stop that kind of thinking.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>26. I kept my exercise clothes or shoes where I could see them as a reminder to exercise.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>27. I chose low-calorie and/or low-fat foods to eat instead of higher calorie options.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>Occasionally</td>
<td>About half the time</td>
<td>Most of the time</td>
<td>Always</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-------</td>
<td>--------------</td>
<td>---------------------</td>
<td>------------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>28. I kept a graph of my weight.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>29. If I regained weight, I thought about my past successes and reminded myself that I could get back on track.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>30. I ate high-fiber foods (e.g., whole grain breads or cereals, fruit, vegetables)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
Appendix E. Healthy Habits Assessment.

Circle the answer that best describes your child’s average eating and activity habits.

My child eats veggies and fruits:

- 0-1 times a day
- 1-2 times a day
- 3-4 times a day
- More than 4 times a day

My child eats out:

- More than 4 times a week
- 3-4 times a week
- 1-2 times a week
- 0-1 times a week

My child is active:

- Not very often
- Less than 30 minutes a day
- 30-60 minutes a day
- More than 60 minutes a day

My child has sweet drinks (cola, sweet tea, juice, sport drinks, other juice drinks):

- More than 3 a day
- 2 a day
- 1 a day
- Not very often

My child watches television or spends time on the computer or playing video games:

- More than 2 hours a day
- 1-2 hours a day
- 30-60 minutes a day
- Not very often

Have you thought about trying a new healthy habit for your family or child?

- Not at all
- Just thinking about it
- We’ve tried to make healthy changes
- We’ve been making healthy changes

If you could work on one healthy habit, which would it be?

- Fill half your plate with veggies & fruits
- Be active for 60 minutes
- Limit screen time to one hour
- Drink more water and limit sugar drinks
Appendix F. Barriers to a Healthy Family Lifestyle.
The following is a list of items that are related to eating and exercise habits within your family environment. For each item please indicate how much you believe these apply to your family.

Response Scale

1  Strongly Disagree
2  Somewhat Disagree
3  Neither Agree nor Disagree
4  Somewhat Agree
5  Strongly Agree

1. Our whole family participates in physical activity together.
2. Our family makes an effort to eat healthy foods.
3. There is a grocery store close to our house.
4. Our family does not focus on being healthy.
5. Our family always has enough food to eat.
6. It is hard for me to find the time to prepare healthy food at home.
7. Our neighborhood is a safe place to walk or play.
8. It is hard for my family to find the time for physical activity.
9. I eat fruits and vegetables in front of my child.
10. In our house, decisions about what to eat are based on cost.
11. I feel motivated to keep healthy foods at home.
12. I praise my child for physical activity.
13. Usual social activities in our family do not include exercise.
14. I compliment my child when he/she makes healthy eating choices.
15. Our family is too busy to each meals together.
16. There are recreational facilities available to my child (e.g. basketball court, gym, park).
17. Our family eats fast food because it is cheap.
18. I feel motivated to help my family be healthy.
19. I compliment my child when he/she exercises.
20. I talk to my child about how to make healthy eating choices.
21. Our family eats quick foods because we don’t have time to prepare a meal.
22. There is a park within walking distance of our home.
23. Having a gym membership is too expensive for our family.
24. Being healthy is important in our family.
25. I encourage my child to exercise regularly.
26. Our family eats dinner at a similar time and in the same place most nights.
27. Our family has enough time to exercise together.
28. There are many fast-food restaurants near our house.
29. Extracurricular sports are too expensive for my child to participate.
30. I am not interested in exercising with my family.
31. I talk to my child about different ways to get more physical activity.
32. Our family keeps junk food in the house.
33. Our family often eats fast food (e.g. McDonalds) to save time.
34. My child has places to exercise when the weather is poor.
35. Fruits and vegetables are too expensive for our family to buy.
36. I do not like eating healthy foods with my family.
37. Our family time is spent watching T.V.
38. When our family goes to restaurants we try to make healthy choices.
39. If we were less busy we would eat less prepackaged meals (e.g. mac and cheese).
40. If my family had more money my child could eat healthier foods.
41. I am interested in making healthy meals with my family.
### Appendix G. Acceptance and Action Questionnaire – II.

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>It's OK if I remember something unpleasant.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>My painful experiences and memories make it difficult for me to live a life that I would value.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>I'm afraid of my feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>I worry about not being able to control my worries and feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>My painful memories prevent me from having a fulfilling life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>I am in control of my life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>Emotions cause problems in my life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>It seems like most people are handling their lives better than I am.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9.</td>
<td>Worries get in the way of my success.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10.</td>
<td>My thoughts and feelings do not get in the way of how I want to live my life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>