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Exploration of Ethnic Differences Between Hispanic and Marshallese Mothers’ Child Body Perceptions and Factors that Impact Childhood Obesity

An Honors Thesis submitted in Partial Fulfillment of the Requirements for Honors Studies in Nursing

By

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Abstract

Childhood obesity is on the rise in the United States, especially among the Southern states and in minority ethnic groups. This condition is a known contributor to many chronic diseases, such as diabetes and cardiovascular disease, which develop in early adulthood. The Marshallese people—whose population is higher in Northwest Arkansas than anywhere else in the contiguous United States—have a high incidence of obesity and diabetes. Additionally, the Hispanic population per capita in Northwest Arkansas is more than triple that of the state of Arkansas, and have comparable obesity rates to the Marshallese population. The purposes of this study were to explore if there are differences between Marshallese and Hispanic mothers’ perception of their children’s body size; to determine if there were differences in Marshallese and Hispanic mothers correctly identifying obese children’s body silhouettes; and to examine whether there are differences between Marshallese and Hispanic mothers’ knowledge of the impact of obesity on the future health of their children. Identification of possible factors that contribute to the rise in childhood obesity of the Marshallese and Hispanic populations could mitigate preventable chronic life-threatening conditions in children. A body image tool was used in this study to examine body size perceptions in parents of obese Marshallese and Hispanic children and their health perceptions of diseases related to childhood obesity. The results revealed educational, cultural, and linguistic barriers and yielded a better cultural understanding
of health between these groups with the goal of preventing childhood obesity and developing strategies in teaching prevention.

**Introduction**

In the late 1940s and early 1950s, the United States conducted a nuclear weapons testing program in the Micronesian Islands. After the cessation of the program, many health concerns emerged concerning the exposure of the native islanders to radiation. The natives experienced an increase in infant mortality and cancers. Additionally, they experienced a lack of local produce due to the danger of radiation consumption through contamination of food sources (Riklon, Wilfred, Hixon, & Palafox, 2010, p. 8). Due to the inedibility of the local produce, processed foods high in fat and refined sugars were imported (Engelberger et al., 2005, p. 80). As a result, Micronesians have experienced increased rates of cancers, obesity, and diabetes, among other chronic illnesses.

Hispanics have similar risk factors potentially contributing to their population’s increased prevalence of childhood obesity. Many Hispanics were raised outside of the United States in a low socioeconomic status setting with scarce food sources. The accessible food consisted mainly of high carbohydrate foods, while fruits and vegetables were scarce. During the parents’ childhood, having nutritious and plentiful food was considered a privilege. Therefore, as this
population migrated to the United States and their food sources became less scarce, the amount of food they ingested increased. It was also found that mothers of obese children in this population consistently explained that they believe they are providing their children with a better life than they were afforded. The ability to feed their children is seen as an achievement for these mothers (Kalinowski et al., 2012). As a result, there is an increased rate of childhood obesity within the Hispanic culture related to the cultural beliefs of first generation mothers.

Obesity is highly prevalent in the United States. The Centers for Disease Control (CDC) reported an adult obesity rate of 30-35\% in Arkansas in 2011. Their study noted that the Southern states had the highest prevalence of obesity (29.5\%). The report also examined different ethnicities, and identified a 5-15\% increased prevalence of obesity in all ethnicities compared to non-Hispanic whites (Centers for Disease Control [CDC], 2012). Gittelsohn (2003) found that 50\% of Marshallese men over the age of 18 years were overweight (29\%) or obese (21\%) (p. 312S). The CDC also examined rates of childhood obesity across the nation and found that 17\% of all children ages 2-19 are obese—three times the rate in 1980. In Arkansas, there is a 10-15\% rate of childhood obesity with a 15-20\% rate in northwest Arkansas (CDC, 2012). At this time, there is no current data on Marshallese childhood obesity rates. The relative distribution of Marshallese islanders in the United States is 0.2\%; in Springdale, Arkansas, the Marshallese constitutes 5.7\% of the total city population (U.S. Census Bureau, 2012). The
Northwest Arkansas Marshallese population is the largest in the contiguous United States, and has doubled in the past six years (Williams & Hampton, 2005, p. 317). Chronic diseases and obesity—results of lifestyle factors—are rising in Marshallese youth, increasing the rates of diabetes, hypertension and heart disease in the group’s adult population (Riklon et al., 2010, p. 7).

Obesity is also a common finding among the Hispanic population—especially in children. A study by Ogden and Carroll (2010) identified a childhood obesity rate of Mexican American boys of 26.8%, which surpasses the national, average and is comparable to the Marshallese rates. The Hispanic population in Northwest Arkansas is increasing, and currently constitutes 35.4% of the population of Springdale, Arkansas. The proportion of Hispanics in Arkansas is 6.4% (U.S. Census Bureau, 2013).

There are a limited number of studies on the incidence of obesity and its impact on development of chronic disease in Marshallese children in the United States. One study by Small, Melnyk, Anderson-Gifford, and Hampl (2009) explained that adiposity rebound is a factor that predicts adult obesity and is routinely found in children ages five to seven years. They further stated, “…overweight and obesity prevention and treatment intervention strategies that occur prior to this time are likely to alter children’s growth trajectories and halt the process of excess weight development” (p. 358). Another study by Lippe et al. (2008) described the priority
health-related risk behaviors shown in the youth and young adult populations in the Marshall Islands, noting that cancer, cardiovascular diseases, stroke, and diabetes are the leading causes of mortality among all ages of individuals from the five Pacific Island territories. (p. 28). Disease factors were related to the reduced consumption of fruits and vegetables eaten within the last seven days and lack of physical activity. As many as 72.8% to 83.6% of youth in this population were found to have not eaten fruits or vegetables at least five times during the previous seven days. The percentage of youths that did not meet recommended amounts of physical activity (sixty minutes of exercise that increased heart rate and breathing five days per week) ranged from 64.0% to 77.2%. Within this study of the Marshall Island youth participants, 38.6% were obese (Lippe et al., 2008).

There is limited information available on the causes of obesity and interventions to mitigate such health disparities among this population, especially in the United States. There is also limited information concerning how Marshallese immigrants perceive body size as it relates to potential life threatening medical conditions, such as diabetes, and their conception of the wellness-illness continuum.
Literature Review

Childhood obesity contributes to lifelong diseases that can be prevented by the identification and modification of food intake and exercise. There is very limited research available on Marshallese rates of obesity, cultural conceptions of health, and childhood obesity prevalence. In 2007, Mozhdeh et al. conducted a study on the diets of children of Asians and Pacific Islanders using food recognition, daily food diaries, and factor analysis of the foods they were most likely eating. Their study found these children were consuming mostly rice and soda drinks with snacks concentrated in refined sugar (p. 744-745). The study did not identify parental perceptions of their children’s eating habits, nor did it identify a reason for the underconsumption of healthier options.

There are few studies on health perception and body image as it relates to obese Marshallese children. Gittelsohn et al. (2007) conducted a study of the diets of Marshall Islanders, with a focus on interventions that encouraged healthy eating while discouraging unhealthy eating. Their interventions involved the identification of large, cheap, lower fat meals and instruction on how to read nutritional labels. Their interventions led to a significant increase in the number of healthy options chosen and a decrease in unhealthy options chosen for all education levels and age ranges (p. 44-50). Another study by Cortes et al. (2001) focused on the health perceptions of diabetes and obesity in the Marshall Islands. The researchers used a body
size perception tool that depicted nine males and females, ranging from extremely underweight to extremely overweight, to identify their perceptions of health as it related to body size. A knowledge, attitudes, and beliefs (KAB) survey was also used to identify beliefs about obesity and general healthy activities as it relates to diabetes (p. 701-702). This study found fatty foods were perceived as high status foods and the primary methods of food preparation included boiling or frying food in oil (p. 703). These researchers found 50% of all respondents felt children should be allowed to eat as much as they want of whatever foods they desired. Respondents also felt children shouldn’t be asked to eat any foods they would rather not eat (p. 707). The study’s body size image tool identified a common greeting among the Marshallese: “Oh you look good; you look fatter than you did before” (p. 707). According to Marshallese respondents, obesity is an indicator that one is healthy and wealthy, and thus can spend more time on entertainment and less on manual labor and exercise (p. 707). Using the body image tool, although 22.6% of respondents identified the most obese figure as unhealthy, 19.4% rated it as healthy. It was also found that only 9.7% rated the extremely thin figure as healthy, while 58.1% described it as unhealthy. Fifty-four percent of respondents attributed the high prevalence of diabetes to atomic bomb testing (p. 708). This study does identify a more primitive health ideology in the Marshallese, which may contribute to the resultant increase in childhood obesity. The study was limited to indigenous populations and their health beliefs.
In the Hispanic population, childhood obesity is above the national average. The perception of a child’s health status is unique in relation to the mothers’ beliefs. Guerrero, Slusser, Barreto, Rosales, and Kuo (2011) found 33% of Mexican-American children were obese between the ages of 2-5 years. This study identified causative factors that included physical inactivity, high-fat food consumption, and role-modeling among family members. Guerrero et al. (2011) also found cultural influences, stating “…parental perceptions are relevant as well, given Latina mothers have a maternal preference for plumper young children, associate thinness with poor health, and fail to perceive their children as overweight” (p. 1309). Based on this finding, it can be assumed that a cultural barrier may be present in defining childhood obesity. The mothers’ ability to understand the term overweight was solely dependent on their child’s functional status. If the child was active and highly functional, the mother did not perceive her child as being overweight.

A study conducted by Adams, Quinn, and Prince (2005) examined Native American mothers’ perceptions of their children’s weight status. This study identified the importance of the caregiver identifying their child as overweight. Only 15.1% of all participants were able to accurately perceive their child as being overweight. Among these 15.1%, their children were all above the 99th percentile on the growth for height chart, indicating that the caregiver should have correctly identified the child’s weight. The caregiver’s generation was also a potential
contributing factor to the ability to accurately identify an overweight child. Grandmothers were more likely to identify their grandchildren as overweight, and the study attributes this to their likely previous exposure to diseases related to obesity in their families. Adams et al. (2005) stated, “…why parents do not perceive their children as being overweight…Potentially, caregivers use a high threshold for defining overweight, are reluctant to label their own child as overweight, or some combination of these and other factors” (p. 150).

Tools to assess body image are variable, including contour drawings, darkened silhouettes, and photographs. Contour images have been used in many studies to examine the relationships between body image perception and body image satisfaction as well as to assess differences in body image perception between genders, populations, and weight categories. Thompson and Gray (1995) developed a Contour Drawing Rating Scale, consisting of nine male and nine female contour drawings. A modified version of this silhouette tool was used in this study. Validity and reliability testing has not been performed for the modified version.

**Aims**

The purpose of this study is to describe differences in Hispanic and Marshallese mothers’ perceptions of their children’s body size whose BMI ≥ 85%ile, and to describe salient factors in understanding ethnic differences in perceptions of obesity and its effect on future health status.
Methods

Study Design

This qualitative descriptive study used a combination of a body image tool for participants to answer 4 questions related their child’s body size perception and a semi-structured interview with 6 questions to identify salient factors in understanding potential differences between Marshallese and Hispanic mothers’ perceptions of obesity and the adverse effects obesity may have on their children’s health.

Measurement Tools

A body image tool modified from the Thompson and Gray (1995) Contour Drawing Rating Scale by the researcher was used to facilitate a survey of 4 questions related to the mothers’ perceptions of health and to assess the mother’s perception of her child’s body size (Appendix A). Mothers were then asked 6 questions related to childhood health perceptions, feeding, and potential problems associated with obesity.

Study Sample

The study sample consisted of two Marshallese and four Hispanic mothers whose children were between the ages of 4 and 12 years of age and whose weight-for-height values fell
above the 95th percentile and/or whose BMI $\geq 85\%$ile who were being seen in a community health clinic.

Procedure

Approval from the University of Arkansas Institutional Review Board (IRB) and permission from the community health clinic was obtained prior to initiating the study. The study was conducted in a community health clinic in Northwest Arkansas that serves an economically disadvantaged and ethnically diverse population, including a large percentage of Marshallese Islanders and Hispanics. The nursing director of the community health clinic identified potential study participants that met the study criteria. Once identified, the researcher contacted the potential participants, explained the purpose of the study, provided the Informed Consent Form, and requested permission to tape the interview. Demographic data collected included the child’s sex, age, ethnicity, and whether the mother was a first or second-generation descendent living in this country. Each mother was presented with the body image tool by the investigator and asked to answer the four questions by pointing to the one of the five silhouettes that most represented their answer:

- Which child in the picture does your child look most like?
- Which child looks the healthiest to you?
- Which child looks the unhealthiest to you?
• Which child do you ideally want your child to look like?

Mothers were then asked 6 semi-structured questions:

• What does having a healthy child mean to you?

• Describe your child’s overall health.

• How do you feel about your child’s current weight? Do they weight too little, just right, or too much?

• What is your child’s eating pattern during the day?

• What kinds of health problems do you believe overweight children can experience?

• If you believe your child is overweight, what measure would you take to correct this?

Fictitious names were assigned to each participant who completed the body image tool questions and the taped interview. Taped interviews were transcribed, after which the taped interviews were destroyed. No other identifying information was collected. A $15 Wal-Mart gift card was given to each participant completing the study.

**Data Analysis**

Each taped interview was transcribed and meaningful themes identified. A descriptive analysis of data will be performed to describe the differences between Marshallese and Hispanic mothers’ perceptions of their children’s weight silhouettes. Data reduction was performed to identify and organize emerging themes and data. A comparison between Marshallese and
Hispanic mothers’ perceptions of their children’s body sizes were examined for similarities and differences.

Results

Silhouette Questions

As shown in the following silhouettes, a one indicates severely underweight, a three is normal, and a five is obese.

Which child in the picture does your child look most like?

<table>
<thead>
<tr>
<th>Participant</th>
<th>Marshallese Participants</th>
<th>Hispanic Participants</th>
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<tbody>
<tr>
<td>Isabella</td>
<td>X</td>
<td>O</td>
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<tr>
<td>Betra</td>
<td>X</td>
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<td>Sofia</td>
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<tr>
<td>Maria</td>
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X= Silhouette selection matched the child's actual body
O= Selection did not match the child's actual body
The participants of the study consisted of 2 Marshallese mothers and 4 Hispanic mothers. Isabella was raised in the Marshall Islands and is the first in her family to live in the US with her five-year-old daughter. Betra also grew up in the Marshall Islands prior to moving to the US. She and her 3 year, 11 month old daughter are also first generation residents in the US. When presented the silhouettes and asked which image most resembles their child, Isabella and Betra chose silhouettes that accurately reflected their children. Both of these Marshallese mothers grew up in the Marshall Islands and identified themselves as first generation to live in the US.

Sofia, Camilia, Lucia, and Maria are all Hispanic mothers and are all second-generation residents in the US. Sofia is the mother of a 3 year 8 month old daughter and Camilia is the mother of a four-year-old son. Lucia is the mother of a four year 2 month old daughter. Maria is the mother of a four-year-old daughter. Interestingly, Sofia and Camilia did not choose silhouettes that accurately reflected their children. All of the Hispanic mothers identified themselves second generation, having been raised in the US. It is feasible that the second generation Hispanics chose a silhouette different from the first generation Marshallese due to “Americanization” in which they have been influenced by the predominant culture in the United States.
Which child looks the healthiest to you?

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<td><strong>Marshallese Participants</strong></td>
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X= Silhouette selection matched the child's actual body  
O= Selection did not match the child's actual body

Surprisingly, the Marshallese mothers were split in their response to this question. When Betra was asked why she chose this figure over all the others, she explained that she felt the child's silhouette she chose had a nice figure. This appeared to be the only aspect of health she was considering. Despite health issues related to being too thin, she chose the smallest silhouette, which may demonstrate an inadequate knowledge of the relationship between the concept of health and body weight. Sofía, Camilia, Lucia, and Maria were also split in their choices of identifying a healthy silhouette.

Which child looks the unhealthiest to you?
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<th>Participant</th>
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X= Sillouette selection matched the child's actual body  
O= Selection did not match the child's actual body

All mothers identified obesity as being unhealthy regardless of differences in ethnicities and cultural backgrounds. When asked why they chose the number 5 silhouette over all other silhouettes, they explained they thought this picture demonstrated a child that was overweight. It appears that these mothers understand that obesity is unhealthy but cannot translate this concept to their own child.

Which child do you ideally want your child to look like?
Both Isabella and Breta identified an underweight silhouette as the ideal appearance for their children. When Isabella was asked why she chose this silhouette, she responded, “It looks good”. Breta chose an extremely thin silhouette also, and when asked why, she responded, “It is a good figure”. There is an emerging theme among the Marshallese mothers that may be explained by their inadequate understanding of a healthy weight. These mothers may be basing their responses of a particular physical body size, without understanding the other contributors to a healthy weight. These mothers associate a very thin physique with an ideal body weight, but do not understand that being underweight can cause malnutrition and other adverse health effects. This could be an emerging influence of American culture, as they are all first generation.
Americans tend to put emphasis on a thinner physique for an ideal body weight; however, in the Marshallese and Hispanic cultures, a larger silhouette is preferred. These mothers may have also chosen a silhouette that they felt the researcher may have wanted them to choose.

*Semi-Structured Interview Questions:*

What does having a healthy child mean to you?

The Marshallese participants, Isabella and Breta, defined healthy differently than other participants in the study. Isabella could not define healthy as anything other than “good health”. After further prompting, she was still unable to identify components of a healthy child that other cultures explain with ease. Breta explained her definition of a healthy child included, “Child looks good. Skin looks good. Whole body looks clean.” These definitions of health given by the Marshallese mothers were drastically different from the responses of the Hispanic mothers. The Marshallese often do not seek medical care unless they can visualize a sickness, such as a skin abnormality. This was compounded by the inability of the translator to directly translate the English term healthy into Marshallese. Therefore, when the healthcare provider explains that a child is unhealthy due to his or her weight, this population may not understand due to a language barrier and lack of the term within their language. Because of the differences in culture, language, and meaning of health, expectations from both the healthcare professional and patient
may be incongruent, yielding ineffective teaching. Sophia, Camilia, and Lucia explained that a healthy child is one who is active, eats fruits, vegetables and proteins, and doesn’t eat much sugar and fast food. In contrast to the Marshallese study participants, the Hispanic were able to define components that help make a child healthy. A unique finding in the Hispanic population came from Lucia, who stated that health included spending time with parents and drinking a lot of water. This participant has been influenced by her husband’s involvement with the National Guard and explained that she has recently changed the diet habits of her children. She and her family may be more mainstreamed into the American society than others mothers participating in the study.

An interesting finding regarding this question concerns the linguistic barrier the Marshallese may face. The Hispanic participants can more readily understand the word “healthy” because a direct translation exists in the Spanish language. The Marshallese language does not have a term for “healthy”. This creates a language barrier and contributes to their inadequate understanding of health.

Describe your child’s overall health.

The Marshallese participants provided unique responses that revealed cultural influences from the Marshall Islands. The fact that these participants were both first generation further
builds evidence that these responses were based on cultural differences. When participants were approached with this question, the Hispanic mothers adequately explained components of health. The Marshallese mothers were unable to explain components of health. Isabella explained, “She’s not healthy…Back where we come from, she is healthy, but according to the growth-height chart, she is not here.” She further stated, “I thought she was healthy before we came here.” This indicates that she only believes her daughter is unhealthy because a healthcare professional has told her so, but as evidenced by the previous question, she does not understand what this truly means. Then Breta stated, “It’s not good or perfect, but it’s not bad. She has a rash on her skin and she is overweight.” The cultural influence exists in this mother's response because she believes her child is well based on no visualized physical ailments.

Sofia and Camilia responded that their children were healthy because they eat fruits and vegetables and stay active. However, Camilia indicated that her child only likes to eat hamburgers, rice, and beans. This could indicate that while the mother understands the importance of eating vegetables, her child’s preferences determine what he eats. Based on this finding, without more specific education on how to encourage the child to eat more diverse foods, the child could remain obese. Lucia explained that her child is relatively healthy but wants her to lose weight because she doesn’t want her to get diabetes.
How do you feel about your child’s current weight? Do they weight too little, just right, or too much?

Both Marshallese mothers indicated that their children were normal in weight. According to previous answers, this finding is conflicting, indicating an insufficient understanding of how a normal or healthy weight should manifest in body size. All of the Hispanic mothers indicated that their children weighed too much. Specifically to Camilia, this may be attributed to her background and influence of healthy habits from her husband’s experience with the National Guard. When Lucia was asked this question, she explained that his weight is just right, but that he eats too much fast food.

What is your child’s eating pattern during the day?

The Marshallese mothers explained that their children eat a lot of food all day long, and Breta specifically stated, “She snacks on too much on junk food like chips and not enough on homemade food… I make salad, rice, and meats but she doesn’t like that…” Only Camilia explained that her child does not eat many snacks but just the regular three meals throughout the day.

What kinds of health problems do you believe overweight children can experience?
The Marshallese mothers only identified diabetes as a potential problem. All of the Hispanic mothers included multiple health problems including diabetes, asthma, hypercholesterolemia, and hypertension.

If you believe your child is overweight, what measure would you take to correct this?

The Marshallese mothers were only able to identify food restriction as a method to correct their children’s weight. In contrast, the Hispanic mothers were able to verbalize more options such as “I will take care of her diet and encourage her to eat more vegetables, be more active, eat less sugary foods, don’t drink cokes, drink a lot of water, and don’t drink a lot of juices high in sugar”; “Don’t let him eat fast food and don’t eat fast food in front of him”; and “I would make her eat less beans and rice and more vegetables” respectively.

Discussion

After conducting this study, one theme that emerged is the large knowledge gap concerning health in these Marshallese mothers. This study revealed an important educational opportunity for healthcare professionals to provide more culturally competent care for the Marshallese population. Some similarities were found between the Marshallese and Hispanic
mothers regarding perceptions of body size. However, important disparities were found in 
Marshallese mothers concerning health knowledge and education—results of large language and 
educational barriers. Research limitations include a small study sample.

**Language Barriers**

A factor that could be contributing to the prevalence of Marshallese childhood obesity is 
a language barrier. Based on the results of the semi-structured interview question regarding what 
a healthy child means, a language barrier emerged. This vulnerable population is unable to 
directly translate the word “healthy” into the Marshallese language. The Marshallese mothers 
were unable to define "healthy" as healthcare professionals intend. Because there is not a direct 
translation, a Marshallese translator was interviewed about how she describes the word healthy 
to the participants. She explained that she asks the participants about wellness and absence of 
sickness in lieu of a direct translation of “healthy”. However, this culture’s definition of wellness 
and absence of sickness is incongruent with the English term “healthy”. During this explanation, 
the translator defined wellness as, “…no problems in your life. It includes healthy looking skin, 
overall good appearance, and a free mind” and defined sickness as, “…to not be dead, and if you 
are sick, you are near death.” This presents an interesting opportunity to provide individualized 
education in the healthcare setting for this ethnic group. Some aspects of the Marshallese 
definition of wellness (overall good appearance and a free mind) coincide with some of the
World Health Organizations definition of health, but the Marshallese definition is limiting. The World Health Organization (2003) defines health as, “…a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” Based on the English definition of health, there is an obvious cross-cultural misunderstanding. As a result of the inability to adequately translate “healthy” into Marshallese, the Marshallese mothers were unable to correctly explain means to encourage healthy behavior in their children. It was also found that the Marshallese mothers were unable to define the term “healthy” and only referred to it as “good skin” or “health is good”.

It can be concluded from these results that these Marshallese mothers were drastically different in their responses when compared to the Hispanic mothers. The Marshallese are unable to describe healthy as healthcare professionals intend when educating patients. They were unable to describe many major components of health. It can be inferred from this finding that, because they do not have a full understanding of health, there is an educational disparity in this culture. Healthcare professionals may assume the term healthy is universal. However, as evidenced by this finding, it is not and should be addressed appropriately for culturally competent care to occur. Healthcare professionals should take this into consideration when providing care to Marshallese patients.
Another interesting and potential contributing factor to the high prevalence of childhood obesity in the Marshallese is the definition of sick in this culture. The Marshallese translator explained that sick in their language means “near death”. Based on this definition of sick, obesity is not a sickness. An obese child is not near death and doesn’t have any overt illnesses such as skin problems; therefore, they may have a difficulty understanding the importance of reducing obesity in children because they do not view obesity as an illness. It can be concluded that healthcare professionals should make special efforts to educated Marshallese patients about why obesity is—despite outward physical appearance—a health illness, and that it should be managed throughout life.

In contrast to the inability to translate healthy into Marshallese, “saludable” is a direct translation in the Spanish language. The Hispanic translator explained that saludable means healthy just as it does in English and includes aspects of diet and exercise. The translator further explained that saludable also encompasses the mental and social aspects of being healthy. This unique finding is consistent with the discrepancy of answers between Hispanic and Marshallese mothers. The interviewed Hispanic mothers were able to explain what being “healthy” meant; their answers included “exercise…eating vegetables and protein with low fat…spending time with family…playing outside and being active…” Camilia explained how her family began taking steps toward being healthier and how she was greatly influenced by her husband who is in
the National Guard. She explained that she grew up eating unhealthy because she had no other choice. She did not commonly eat fruits and vegetables because she lived with her grandmother and six other children. They lived in a low socioeconomic setting and did not have the opportunity to eat healthier foods. This participant said, “Being overweight looks normal for a Mexican child because they eat a lot of greasy foods like rice and beans.” She said she encourages her children to choose Chex-Mix instead of Cheetos. She further explained that when she takes her children to the store she allows them to pick their snacks and has educated them about eating foods low in cholesterol and sugar, and now they ask if their snacks are low in these before they choose them. She attributes her change in habits and education to the National Guard and the education they provided her husband about being healthy. Through the improvement of her previous health education deficits, this mother has been able to reform her habits to improve the health of herself and her family. These reforms could translate well into another similar disadvantaged population—the Marshallese. Based on this information, Hispanic mothers are at an advantage in the healthcare setting due to the lack of the language barriers seen in the Marshallese population.

A study conducted by Mancuso (2011) stated, “The Joint Commission (2008a) recommended that organizations first establish a foundation for meeting the cultural and linguistic needs of clients. A consistent approach to cultural competence education establishes a
common language across the organization to build a foundation for future dialogue…” (p. 170).

Consistent with these recommendations, it is important that healthcare professionals take linguistic barriers into account when treating diverse patient populations, including the Marshallese.

**Educational Barriers**

Surprising similarities exist between both groups about their perceptions of body size in the semi-structured interview questions. All but two participants identified their child as a five on the silhouette tool, corresponding to an obese level, but when asked during the interview if they felt their child was underweight, just right, or overweight, they said their children were normal or just right. This is interesting because, while they were able to correctly identify their children as obese visually on the silhouette tool, they all believed their children were normal weight.

Therefore, a mother’s definition of a normal, healthy weight needs to be examined so that the healthcare provider can identify and address any possible discrepancies.

When describing their children’s overall health, both Marshallese mothers felt that their children were normal. As evidenced by the answers given by Isabella and Breta in the semi-structured interview, the Marshallese have an inadequate understanding of health. Isabella said that in the Marshallese culture, her child is normal, but according to the healthcare professionals here in the US and the growth for height chart, she is not. This indicates that she only believes
she is unhealthy because a healthcare professional has told her that her child is unhealthy, but as evidenced by her inability to define healthy, she does not understand what this truly means. Breta answered the same question and stated, “It’s not good or perfect, but it’s not bad. She has a rash on her skin and she is overweight.” This indicates that she believes her child is not at a good weight, but according to the results of previous questions about what a healthy child means to her, she is unable to adequately describe what makes a child healthy.

Assessing readiness to learn is extremely important in providing patient education. By describing their obese children as normal, mothers could display a resistance to teaching about ways to reduce obesity. Based on these responses, the proper assessment of readiness to learn has either been ignored by healthcare professionals or is inadequate. However, these issues need to be assessed in all cultures for the most effective teaching, but care must be taken in populations who may not have a proper understanding of health. This assessment may not be beneficial to the Marshallese population, since they do not have a working definition of health to follow, but to some extent should be assessed for optimal teaching of other illnesses. Healthcare professionals need to adapt their explanation to Marshallese patients when addressing health issues to more descriptive terms that may allow the Marshallese patients to incorporate the concept of health. A study conducted Polikandrioti and Babatsikou by (2013) stated, “Indeed, information based on patient needs as perceived by themselves, including their expectations, goals and feelings is more
effective than information based only on the opinions of health professionals about what patients need to know about their health. To tailor information to meet individual needs, the needs have to be articulated by patients themselves” (p. 8). Therefore, patients’ perceptions can hinder or advance the learning process and should be considered for each patient to learn at an optimal level.

An additional educational barrier that exists is based on the answers of participants to the question about what the child’s eating patterns are during the day. Both Marshallese mothers responded that their children eat all day and that they eat a lot of chips. Breta stated that her child eats too much junk food and not enough of what she cooks because the child doesn’t like the prepared food. There may be a need for directed education on how to encourage children to eat foods they would rather not eat. Based on the recent history of the Marshallese people, they are accustomed to processed foods; therefore, they could benefit from different approaches to trying new foods. This may include strategies like keeping unhealthy foods out of the house, integrating new foods and cooking techniques into the family diet, and offering fruits and vegetables for snacks.

It can also be concluded that the Marshallese don't fully understand the potential short and long-term risks of obesity. The only disease associated with obesity that the Marshallese were able to identify was diabetes, while other groups were able to identify more health
concerns—a possible result of their superior health education. Sophia and Camilia were able to identify diabetes, hypertension, hypercholesterolemia, asthma, and inability to walk for long periods of time as complications associated with being overweight. Since the Marshallese have a concept of health that you aren’t sick unless it is visualized and weight is considered a status symbol, there is a great need for education related to childhood obesity. Given an understanding of the adverse effects of obesity—facilitated by improved health education—these participants may be better able to mitigate these problems.

Another contributing factor to childhood obesity related to an educational barrier concerns weight loss strategies. The Marshallese consistently answered that reducing their children’s food intake as the means to help their child lose weight. When both mothers were asked if there was anything else they would do to help their child lose weight, they could not verbalize any other activity. The Marshallese participants could not cite exercise or a more nutritious diet as weight loss strategies, representing an obvious educational deficit specific to this population, further supporting a need for health education reform for this population that surpasses other populations.

Within the Marshallese participants, there were significant findings regarding the silhouette tool and what silhouette the mothers desired for their children. All Marshallese participants correctly identified their children as a five on the continuum of body size, with a five
indicating obesity. However, when asked what they would want their ideal child to look like, one participant responded with a one and another participant answered a two on the silhouette tool, with a one indicating highly underweight and a two indicating slightly underweight. Both of these indicate an underweight child, and when the participants were asked why they chose this particular silhouette, one participant responded, “It has a good figure” and the second participant stated, “It looks good.” This is contradictory to their responses to a subsequent question regarding why they believed that their children look normal or “just-right” during the semi-structured interview. Both answered this question by explaining that in their culture, their weight is normal, but when they came to the clinic, they were told their children were overweight and at risk for diabetes. The participants believe that health is, at least in part, determined by the culture in which they are living. It can be inferred from this finding that they believe their children are normal for their culture, but in our culture are overweight. They seem to lack the understanding that obesity is defined physically and is not subject to the health care provider’s definition or location. Another possible explanation for this discrepancy is that the mothers’ answers could be biased by the presence of a healthcare representative. This could cause the mothers to be inconsistent in their answers. It can also be concluded that they do not understand the full definition of "healthy", and only associate this term with physical size of the body. This presents a cultural barrier to education and a common misconception within this population about obesity.
Identification of this common educational deficit represents an opportunity to improve education for vulnerable patient populations such as the Marshallese.

Cultural Barriers

Cultural barriers can also present problems when providing patient education on obesity. The Marshallese, as a culture, believe that children who more overweight are healthier, happier, and wealthier. If children were thinner in the Marshall Islands, they were considered poor and malnourished. Because of this culture’s beliefs regarding weight, more specific education needs to be provided to allow them to accomplish a normal weight. This needs to be addressed by concurrently explaining the adverse effects associated with obesity as well as the harmful health issues associated with malnutrition. Based on the Marshallese participants’ answers to the silhouette question regarding their child’s ideal body type, the American culture has influenced their perception of a “normal body size”. This should be addressed as this culture continues to converge with the majority influence to prevent their potential goal of underweight children. Therefore, healthcare professionals need to be aware of this cultural barrier that exists within this population and provide direct education on adverse effects of childhood obesity.
Research Implications

A limited number of studies have been conducted on the factors contributing to childhood obesity in the Marshallese population despite its prevalence in Northwest Arkansas. This study explored body size and health perceptions of parents and how these relate to childhood obesity. The identification of these factors can inform intervention strategies and future research of this ethnic group. If a better understanding of Marshallese conceptions of obesity can be gained, the lives of these children can be dramatically extended and improved.

This research study has yielded significant information regarding strategies to provide more culturally competent care. It was found that there is a need for more individualized assessments for the Marshallese population compared with other cultures. An intervention to be performed for the Hispanic culture includes a more adequate assessment of their readiness to learn in order to more specifically address potential educational barriers. Interventions to be performed for the Marshallese population includes avoiding the use of the word “healthy” as healthcare professionals address health-related issues, as well as to provide specific examples of strategies to maintain a “good weight”. It is important to educate this population without the use of the term “healthy” since the word does not exist in the Marshallese language, increasing the likelihood of misinterpretation by the patient or his or her family.
There is also a need to identify specific measures to take to promote a good weight, including exercise and diets high in vitamins, minerals, and proteins and low in fat, salt, and sugar. These measures are more easily translated to Marshallese, thereby providing more culturally competent care and reducing the knowledge gap. These measures can easily be used in educational pamphlets and handouts with specific measures listed, but should be designed in their primary language for increased linguistic competency. These methods have implications in reducing childhood obesity rates in the Marshallese—and possibly other underserved populations—through the acknowledgement of educational disparities identified in this study and the implementation of specific, directed educational materials aimed at improving the overall health and wellness of the child.

**Conclusion**

This study examined possible contributing factors to childhood obesity in the Marshallese population compared to Hispanic populations in order to determine if any barriers were unique to the Marshallese. One factor that is apparent from this study is that the lack of health education in the Marshallese could be contributing to an epidemic of childhood obesity. Due to the language barrier in this culture, there is a health disparity that needs to be addressed to provide more culturally competent care. It is significant that only the Marshallese, whose language cannot translate “healthy”, is the only group that could not define means to promote a healthier weight.
Although there are incongruences in the perceptions of Marshallese children’s body sizes, the underlying issue appears to be an educational deficit on the definition of health and how to achieve it in this population. Healthcare professionals should consider improving communication with specific, directed steps related to diet and exercise to improve the treatment and health of each pediatric patient. Healthcare providers should also avoid using the term “healthy” when working with the Marshallese population, and only provide directed measures to take to promote a “good” weight. Healthcare providers, according to these findings, are adequately educating the Marshallese population about diabetes, one of the main adverse effects of childhood obesity, but are not providing them with complete education on a healthy body size or the tools to change their lifestyles.
References


Ogden, C., Carroll, M., (2010). Prevalence of Obesity Among Children and Adolescents:


Appendix A

Interview Number:

Child’s Sex: _____
Child’s Age: _____

[Diagram of child silhouettes]

☐ First Generation
☐ Second Generation

1 2 3 4 5

1 2 3 4 5