“BODY”
BEYOND OBESITY, DIRECTION YOUTH LATINAS 10-15

Martha Geraty
B.A., University of California Berkeley, 1982

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“BODY”
BEYOND OBESITY, DIRECTION YOUTH LATINAS 10-15

A Thesis

by

Martha Geraty

Approved by:

__________________________________, Committee Chair
Sherrie Carinci

__________________________________, Second Reader
Jana Noel

__________________________________
Date
Student: Martha Geraty

I certify that this student has met the requirements for format contained in the University format manual, and that this Thesis is suitable for shelving in the Library and credit is to be awarded for the Thesis.

______________________________  _______________________
Robert Pritchard, Department Chair       Date

Department of Teacher Education
Statement of Problem

The Hispanic population is growing faster than any other ethnic group in this country and has more that doubled in the past 20 years (U.S. Office of Women’s Health, 2008). By the year 2020, it is estimated that Hispanics will be the single largest minority group in the United States. Hispanics are young, with more than one in three being under the age of 18 years (U.S. Office of Women’s Health). Latina adolescents, in California, are the fastest growing population in the United States and are critically at risk for overweight and obesity (US Office of Women’s Health).

The purpose for this thesis was to analyze and evaluate the underlying causes and hidden reasons why this rapidly growing population of Latina girls are the second most overweight group in the United States today. The primary factors that this study addressed included how culture, heredity, chronic disease, community, poverty, parents, schools, lifestyle, poor nutritional choices and physical inactivity impact
weight and obesity in Latinas, ages 10-15 years. The primary educational research question was: “What are the factors in a convenience sample of pre-pubescent Latina girls that contribute to the overweight and obesity epidemic in this population. The most important secondary educational research question was “How does weight and obesity impact self esteem, body image and self confidence within this population of Latina adolescents?”

Sources of Data

The data used in this study was collected using quantitative methods of data collection. Quantitative data was collected using a questionnaire that obtained demographic, gender roles, physical measurement and health data. This study utilized a Likert scale survey that looked at participant’s weight, body image, appearance and their relationship to self esteem and peer influence. The Likert scale survey provided an assessment of the participant’s nutritional and physical activity behavior. Findings were presented through percentages. The data was presented using a thematic approach.

Conclusions Reached

The key findings from this study, reinforced through extensive research revealed that culture, community poverty, poor nutrition and physical inactivity of both the study participants and their parent’s were major influencers of unhealthy lifestyles, overweight and obesity in this population of Latina adolescents. During this transition from adolescence to young adulthood, the psychological and sociological
factors of “the perfect girl syndrome,” cultural stereotypes, media and peer pressure impact self esteem, confidence and body image within this population of vulnerable adolescent Latinas.

__________________________, Committee Chair
Sherrie Carinci

__________________________
Date
DEDICATION

I dedicate this thesis “BODY”: Beyond Obesity, Direction Youth Latinas 10-15, to my supportive and loving husband Arturo Vargas and to my children Cassandra and Christopher Geraty. Through you Arturo, I have learned to overcome adversity, appreciate the simple things in life and been blessed with your unconditional love and emotional support over the life of our union. Cassandra, my precious daughter, my hope is that you will always have strength in your “voice” and know that that inner beauty, personality and authenticity will determine your character and individuality. To my dear son Christopher, always believe in yourself and know that inner strength, personality and respect for yourself and others will determine your masculinity and the fine man you are and will one day become.

I also dedicate this thesis to my mother, Marilyn and my father, Eugene Geraty for supporting my educational dream and always being there with their words of wisdom, loving reassurance and a shoulder to cry on. To my mother, your role as an educator, and the integration of culture and diversity into our home during my childhood impacted my choice in a life mate, future career goals, passion in education and working toward overcoming adversity, while promoting social and educational justice. I am appreciative of the women in my life Catherine, Jenny and Sarah, who have been valuable role models, supporters and always there as loving sisters in my journey through life. I thank my entire family for having faith in me and providing me
with their unconditional emotional, physical and spiritual support during my educational journey.

I acknowledge and was privileged to have as my graduate studies mentor, Dr. Sherrie Carinci who inspired me to complete a chapter in my life which started over 20 years ago. Dr. Carinci, thank you for opening the doors of educational opportunity by providing a safe environment where expression, voice, diversity, individuality and critical thinking are valued and appreciated. Your passion for teaching, empowerment, gender equity, and the pursuit of social justice has been instrumental to my success. Thank you for your expertise, patience and constant encouragement toward supporting me in my final completion of my graduate studies. Throughout my life and professional career, I worked toward and dreamed of finally obtaining the masters degree in education. This dream has now become a reality!
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Chapter 1
INTRODUCTION

As a wife to a native Mexican, a mother to an adolescent Mexican-American daughter and son, and as a health care professional with over 20 years of experience serving Latinos from diverse backgrounds, the timing was perfect to become immersed in the topic of weight obesity affecting the adolescent Latina population. In researching this public health issue of obesity within an ethnic, age specific population, it is important to evaluate and recognize the roles that society, culture, family, community, schools, lifestyle, behavior and the media have on impacting our youth’s health, minds lifestyles and bodies while affecting their self esteem and future destiny.

Through this study, the researcher was able to draw on her personal experience, knowledge and cultural sensitivity to address a critical health issue affecting the rapidly growing population of Latina adolescent females. The researcher was able to broaden her understanding of the multitude of factors impacting the overweight and obesity epidemic within our society while obtaining new information about the social needs, cultural barriers and dilemmas facing young Latinas today. In so doing, the researcher was able to expand her knowledge of culture, race, class, and gender issues.

Statement of the Problem

The Hispanic population is growing faster than any ethnic group in this country and has more that doubled in the past 20 years (U.S. Office of Woman’s
Health, 2008). By the year 2020, it is estimated that Hispanics will be the single largest minority group in the United States. Hispanics are young, with more than one in three being under the age of 18 years (U.S. Office of Women’s Health). Latinas are defined as women of Spanish and/or Hispanic heritage born and/or living in the United States (Everett, 2000, p. 2). Latinas are the focus of this study because Latina adolescents, in California, are the fastest growing population in the United States and are at risk for overweight and obesity (U.S. Office of Women’s Health).

Over 30% of Latino male and female adolescents are overweight or obese, and more than 51% of Latino male and female adolescents do not exercise (California Medical Association, 2008). African American and Hispanic girls, ages 15-17 years, have been found to have the highest measures of body mass index (BMI), exceeding those of white and Asian girls. Latina adolescents are also less likely to exercise than their white peers (Dounchis, Hayden, & Wilfley, 2001).

Between 1980 and 2000, there has been a two-fold increase in the prevalence of overweight and obesity in adolescents, ages six to 11 years, and a three-fold increase in overweight among adolescents, ages 12-19 years (California Medical Association, 2008). Former Surgeon General Richard Carmona has called obesity “the fastest growing, most threatening disease in America today” (California Medical Association, p. 1). In Sacramento County and surrounding regions, significant health disparities exist among our youth population. Latino children and youth demonstrate the highest rates of overweight and obesity.
Overweight and obesity during the early adolescent years have been associated and directly related to co-morbidity and increased prevalence of chronic diseases such as diabetes, cardiovascular disease and, or future development of these health conditions and their complications into adulthood.

In America today, one in four Americans have some form of heart disease, and one in three Americans has high blood pressure (Robert Wood Johnson Foundation, 2008). Obese and overweight children are more likely to become overweight and obese adults and are on a track for poor health throughout their adult lives (U.S. Center for Disease Control, 2008). Adolescent Latina girls, ages 10-15 years, have been selected for this study as the pre-puberty years are impressionable when adolescents seek affirmation and a feeling of belonging while pursuing their individuality (Advocates for Youth, 2009). Latina girls report lower self-esteem and less body satisfaction than girls from other racial and ethnic backgrounds (Advocates for Youth). These critical years are a time of transition when adolescents experience many stages of development including but not limited to changes in their body image, self concept, self esteem, sexuality and the physical changes associated with the transformation from child to adolescent to young woman.

Purpose of Study

This study addressed the following factors which are indicators to the prevalence of weight and obesity in adolescent Latina girls: demographics, education, economics, sociological and psychological issues, body image, self esteem, nutrition, and levels of physical activity. The primary educational research question was: “What
are the factors in a convenience sample of pre-pubescent Latina girls that contribute to
the overweight and obesity epidemic in this population?” The secondary education
research question was: “How does overweight and obesity with this population of
Latina adolescent girls impact self esteem and body image?”

The purpose for this thesis was to analyze and evaluate the underlying causes
and factors attributed to the increased prevalence of weight/obesity in adolescent
Latinas. The primary factors that this study addressed include how culture, heredity,
community, family, schools, nutritional choices, physical activity, co-morbid
conditions, chronic disease, and disparities impact weight and self esteem in Latinas,
ages 10-15 years.

Methods

The primary educational research questions were:

1. What are the factors in a convenience sample of pre-pubescent Latina girls
   that contribute to the overweight and obesity epidemic in this population?

   and

2. What is the impact of weight and obesity on psychological factors
   specifically self esteem, body image and self-confidence within this
   population?”

The survey was designed that measured attitudes and behavior related to
nutritional choice, physical activity, environment, culture and their impact on self-
esteeem and body image. The survey also assessed the association of community
poverty, heredity, co-morbid health conditions, culture, education, and socioeconomic
status and their impact on overweight and obesity within the Latina adolescent population.

The surveys were designed using a quantitative research model within a larger ethnographic research study. The survey utilized a five point Likert scale starting with strongly agree (5) to strongly disagree (1) and included definitive “yes” and “no” questions and quantifiable answers (see Appendix A). The quantitative research method was the most effective method as the variables can be isolated, the extraneous variables can be controlled and the researcher was able to use a standardized procedure to analyze and draw conclusions from the data (Leedy & Ormrod, 2001).

The surveys for the research study were anonymous and random, administered to 50 pre teen bi-cultural adolescent Latina girls, ages 10-15 years, by a health educator in a public setting. Volunteer health educators and the researcher conducted a self report height and weight assessment or BMI measurement that was used as a baseline for qualifying for the study.

When the surveys were collected, they were sorted into two groups that included participants who were normal, healthy weight and those who were overweight or obese. The survey data was statistically analyzed using an SPSS tool with a T-Test used to measure differences and similarities among the variables.

Though this study focused on the critical factors that influenced and are the foundation of the problem, the surveys used in this study focused on the multitude of factors to obtain a balanced overview and honest and unbiased assessment of the factors related to overweight and obesity from the surveyed participants. The survey
data addressed the target problem and critical issues of education and prevention of overweight and obesity in Latina adolescents.

Limitations

Prior to commencing this research project and survey process, the researcher identified possible limitations that might occur. The participants might not wish to participate in this type of study due to stigmas related to weight and obesity. Some of the participants might decline to state their ethnicities due to numerous factors. Some participants may not take the time to provide honest answers regarding the survey, which may limit the results. The participant sample size was small and reflected only Latina adolescents from two Northern California Counties. The results from the study may not have been reflective of a rural population and could not be generalized to all other Latina adolescents.

While the survey method is critical in providing a profile of the population, cultural assumptions should not be made using this small sample size. The information, however, that is ascertained within the survey results is important to understanding, addressing and providing solutions to this critical issue of obesity within the Latina adolescent population. It is important to acknowledge that in conducting a research study similar to this, the researcher must have cultural competency and sensitivity to the culture, traditions and family structure to earn the trust of the community. It is also essential that the researcher is sensitive to the education, social, linguistic and cultural barriers of the population in recruiting
voluntary participation and securing trust from the parents and their children to be involved in the research study.

Theoretical Framework

This thesis titled “BODY”: Beyond Obesity, Direction Youth: Latinas 10-15, provides a comprehensive review of current data, research and information from the American Association of University Women, the United States Centers for Disease Control, American Community Survey, UCLA Health Policy Research Institute, American Heart Association, American Psychological Association and the United States Office of Women’s Health about the prevalence and major factors impacting weight and obesity in our region’s adolescent population. “BODY”: Beyond Obesity-Direction Youth-Latinas 10-15, addresses the major factors of culture, poverty, heredity, community, family, school nutritional choices, physical activity, chronic disease and disparities and their impact weight and self-esteem in Latinas, ages 10-15 years.

The literature review will demonstrate the causes and underlying reasons for overweight and obesity within the adolescent Latina population and the ultimate effects of poor self esteem and body image within this vulnerable population. This thesis provides research that suggests that obesity is in part, socially structured (Young & Nestle, 2002) and a multitude of individual factors such as gender, race, ethnicity, family and community and socioeconomic conditions influence adolescent obesity (Cristol, 2003; Karlsen & Nazroo, 2002; Sanjay, 2000; Wang, 2001).
The research and theoretical basis for the study covers topics that include the cultural and psychosocial factors that impact self esteem levels as the Latina transitions from adolescence to young adulthood. Through this thesis, the many factors that impact self-esteem among adolescent Latina girls will be examined and explained. The factors include: culture, stereotypes, unrealistic expectations, the perfect girl syndrome and the influence of acculturation, mainstream society, media, schools, parents and peers on self esteem and body image.

This thesis reviewed Drs. David and Myra Sadker discussion in the American Association of University Women’s [AAUW] Report: How Schools Shortchange Girls (1992) concerning hidden stereotypical roles and society’s unrealistic expectations of adolescent girls in our society. These stereotypical roles can impact their self esteem, body image and emotional development. The cause for the loss of voice, confidence, and self-esteem of adolescent girls in middle school researched by Dr. Mary Pipher (1994), Nel Noddings (1992), Brown and Gilligan (1992), the Sadkers (1994), and Rosalind Wiseman (2002) was a primary focus for this study.

In Failing at Fairness: How Our Schools Cheat Girls (1994), David and Myra Sadker state “the transition from elementary to middle school may be the most damaging period of a girl’s young life” (p. 78). There is a strong shift in the transition from adolescence to young adulthood as girls experience many physiological changes that affect their self concept, confidence levels and self esteem. The AAUW (1992) states that during this transition, adolescent girls must meet unique demands in a
culture that both idealizes and exploits the sexuality of young women and that also assigns them roles that are clearly less valued than male roles.

This message is true within the adolescent Latina’s cultural experience where traditional roles reinforce machismo and marianismo. The male within the traditional Latino family is dominant and controlling of his wife and daughters while the female is to be selfless and dedicated to serving her husband and her children. The cultural messages of the perfect girl and religious expectations related to pureness vs sexuality further reinforce this message. The bicultural Latina adolescent finds herself in a conflict between her parent’s expectations, traditional morals and cultural identity and that of her peers and the dominant cultural values of mainstream America.

The messages that affect Latina self esteem and body image can also be attributed to the unrealistic expectations and messages of the “perfect girl syndrome” that are perpetuated in the media and reinforced in society, schools and among peers. Brown and Gilligan (1992) in their five year study, were very attentive to the girls’, struggle for their identity, voice and their desire perfection to emulate the perfect girl image. The perfect girl image and the desire to have relationships come at a price, the loss of true self. “Many young women begin their young lives with the ability to speak their thoughts and desires, yet by adolescence, the need for relationships with peers takes control and causes girls to conform to the image of the perfect girl. (p. 198)

According to Brown and Gilligan, girls experience psychological losses as they go through adolescence, including loss of voice. Brown and Gilligan contended that this
loss of voice causes girls to disconnect from themselves, and to lose touch with their authentic selves which can impact their mental health, confidence and self esteem (Brown & Gilligan, 1992).

Definitions of Terms

**Acculturation**: A process by which a group adopts the cultural characteristics and practices from the dominant culture (Pizarro & Vera, 2001, p. 93).

**Adolescence**: is transition from childhood to adulthood (Webster’s Dictionary, 1998).

**Authentic relationship**: Interaction where people can voice their thoughts and feelings, be open and mutual, and where partially formed thoughts and strong feelings can be spoken and heard (Brown & Gilligan, 1992, p. 40).

**Bias**: double standards for males and females; condescension, tokenism, denial of achieved status or authority; backlash against women who succeed in improving their status; and divide-and-conquer strategies that praise individuals as better than others in their ethnic or gender groups (American Association of University Women, 1992, p. 110).

**Biculturalism**: An integration of the competencies and sensitivities associated with two cultures within a person (Buriel, Perez, DeMent, Chavez, & Moran, 1998, p. 286).

**Body-esteem**: a construct that includes an individual's attitudes, evaluations, and feelings about the body (Dwyer, Feldman, Seltzer, & Mayer, 1969).
*Connection:* Living or experiencing authentic relationships (Brown & Gilligan, 1992, p. 3).

*Culture:* is the behaviors and beliefs characteristic of a particular social, ethnic, or age group (Webster’s Dictionary, 2004, p. 353).

*Engagement:* Involves school participation, connection, attachment and integration in particular settings and tasks (Hanson, Walker, & Flom, 1995, p. 38).

*Ethnic group:* A group that has unique behavior and or racial characteristics that enable other groups to easily identify its members and are often a numerical minority within the nation state and victims of institutionalized discrimination (Banks, 1999, p. 115).

*Ethnic identity:* A dialectical process that involves internal and external opinions and processes that includes the individual’s self-identification and outsiders’ ethnic designation (Portes & MacLeod, 1996, p. 527).

*Idealized relationship:* The replacement of authentic relationship through the struggle to authorize or take seriously one’s own experience and conform to socially accepted roles (Brown & Gilligan, 1992, p. 6).

“*Latina*” allows for multiple countries of origin and has become the preferred term among writers and critics in the United States. Latina and Latino are gender specific terms while Latino and Latina serve to indicate both genders. Latinas are defined as women of Spanish and/or Hispanic heritage born and/or living in the United States (Everett, 2000, p. 2).
Machismo; for men the sense of virility, of personal worth in one’s own eyes and in those of one’s peers. The idea of male dominance and superiority is probably the characteristic emphasized in most descriptions of both Chicano and Mexican families (Schaefer, 1996, p. 294).

Marianismo: describes the qualities of femininity that are complementary to those of machismo in men. A good woman accepts the dominance of men and consistently places the needs of the family first (Schaefer, 1996, p 294).

Risk factor is a variable that has been shown to prospectively predict onset of an adverse outcome among individuals who are initially free of the condition (Kraemer et al., 1997).


Voice: Speak one’s feelings, thoughts, and experiences in relationships (Brown & Gilligan, 1992, p. 4).

Organization of Thesis

Chapter 1 of the thesis provides a brief overview of the study. It covers the study’s introduction, statement of the problem, purpose, methods, limitations, theoretical basis, and a definition of terms. It provides a list of terms used throughout the study and describes the researcher’s background. Chapter 2 is a synthesized review of current literature about the multitude of factors that are at the foundation of this critical public health issue of overweight and obesity in adolescent Latinas. The chapter begins with a demographic overview of the population and a statement of the
problem of weight and obesity in the adolescent population. It describes the adolescent experience and the impact of culture on self esteem. The chapter delves into the association of adolescent obesity to poverty, community design and access. It addresses the question of weight and heredity and its relationship to chronic disease. Finally, the literature presented in Chapter 2, reviews the critical issues of nutritional choices and physical inactivity as root causes to the problem.

Chapter 3 describes the methods used through the survey process and research study. It describes the participants of the study, as well as the setting and procedures used to obtain the survey’s results. Chapter 4 offers an analysis of the research findings, data and results of the survey. Chapter 5 discusses the results and provides recommendations and innovative community solutions that address the high influencers inherent to this critical public health issue of overweight and obesity in our adolescent Latina population.

Background of Researcher

Martha Geraty is a health care professional with over 20 years of expertise in health education program development and community outreach serving youth, adults and elder members of diverse ethnic communities. This thesis, “BODY”: Beyond Obesity, Direction, Youth-Latinas, 10-15 integrates her course studies within the area of physiology and psychology at UC Berkeley and her dedication to developing health education programs for at risk underserved ethnic communities. Martha’s graduate program studies in Education with a focus on gender equity and multicultural health provide the opportunity to utilize current data and information about the prevalence of
weight and obesity in our region’s adolescent population while delving deeper to address the critical weight and obesity epidemic affecting adolescent Latinas today.

As a Health Promotion Consultant for a national health plan, she is responsible for the planning, coordination and administration of health education programs and services that serve at-risk, ethnically diverse Medi-Cal members in Northern California. This thesis provided her with the opportunity to conduct an in-depth analysis of a serious health issue that is drastically impacting and affecting the communities that she serves.

Finally, through research, personal and professional experience, she possesses extensive knowledge of the Latino culture, health customs, traditions and family structure as she has developed culturally and linguistically sensitive programs targeted toward Latinos of all ages. These programs have addressed the topics of nutrition, physical activity chronic disease prevention and health promotion. Overweight and obesity has become a chronic disease in our youth today that can transcend into adulthood impacting future health and resulting in serious life threatening consequences.
Chapter 2

REVIEW OF RELATED LITERATURE

This thesis was designed to understand the many factors that influence and are the foundation of the epidemic of overweight and obesity in Latinas today. Chapter 2 begins with a demographic overview of the population and the prevalence of the problem. It examines the impact that culture, gender roles, stereotypes, peers, media and the perfect girl syndrome have on the adolescent’s self esteem and body image. This chapter presents a plethora of research on the influence that community poverty, food access, schools, parents values and norms have on this critical health issue of weight and obesity in this population. The literature describes weight and obesity and it’s association to heredity co-morbid conditions and chronic disease within the Latino population. Finally, this chapter concludes with a review of the critical role of nutrition, physical inactivity and media in the perpetuation of the problems associated with weight and obesity within the adolescent Latina population

Demographics

Obesity is now one of the most serious health problems among American children in the United States today (Robert Wood Johnson Foundation, 2008). Latinos comprise the fastest growing racial/ethnic group in the United States. California is home to about 480,000 obese adolescents, with the highest rate of obesity among low income teens. Sacramento County ranks 24th among 58 California counties as being the most overweight in the State, with over 30% of Latino male and female adolescents, overweight or obese, and 51% of Latino adolescents who do not exercise
(Children Now, 2007). Over the next 20 years, experts estimate that the number of Latino adolescent teens will increase by 60% while the total teen population will grow by only 8% (Advocates for Youth, 2009). By the year 2020, it is estimated that Hispanics will be the single largest minority group in the United States. In 2008, more than one in three Hispanics were under the age of 18 and one of every five teens was Latina (U.S. Office of Women’s Health, 2008). Over the past 25 years, the percentage of overweight girls has more than doubled. Poor and minority girls have the highest rates of childhood obesity. Latino adolescents are the most overweight group in the United States followed closely by Latinas (U.S. Center for Disease Control, 2004).

Adolescence and Self Esteem: A Time of Transition

The lives of adolescent Latina girls are complex affected by gender, race, ethnicity, class, differing abilities and sexual orientation. The adolescent years are a time of transition when young girls experience many changes in their development including but not limited to body image, self concept, self esteem, sexuality concerns, peer influence and the physical changes and transformation of adolescent to adult female.

Between the ages of eight-11 years, girls tend to be androgynous (Rothenberg, 1996). They view themselves as strong and confident and are not afraid to say what they think. Many girls seem to think well of themselves in the primary grades but by the age of 12 years may suffer a significant decline in self confidence and body image acceptance (Orenstein, 1994). At the age of eight, over half of all young girls stated they felt positively about themselves. However, as the AAUW (1992) reports
as girls mature the declining self-esteem, negative body image, and symptoms of depression do not falter. In fact, these negative feelings only escalate as girls move further into adolescence, as by the age of 16 less than 30% of young women feel positively about themselves. (AAUW, 1992).

“Girls learn at a very young age, that their value is determined by their beauty, weight and how sexy they may be. A narrow definition of sexuality encourages adolescent girls to focus on appearance and sex appeal” (Levin & Kilbourne, 2008).

As they transition into adolescence, girls also begin to experience pressure toward more rigid conceptions of gender roles. They become more concerned about their physical and sexual attractiveness. Norma Elia Cantu (1997) in her fictional novel, *Canícula: Snapshots of a Girlhood en la Frontera*, stands her 13 year old character before the mirror asking “Who Am I?” (Everett, 2000). Searching for identity in front of the mirror portrays the critical relationship between identity and physical appearance. Girls at this age, pay more attention to behavior and other’s reactions and perceptions of them (Everett). During adolescence, girls are challenged to come to terms with the stages of puberty which includes considerable changes in their bodies and significant weight gain (Mendelson & White, 1985).

As adolescent girls attempt to reconcile the reality of their bodies with the unrealistic and unattainable cultural demands for female thinness, large numbers of girls experience intense decline in self esteem and body image dissatisfaction (Mendelson & White, 1985). “Self-esteem is the evaluative manner in which one judges oneself and forms the foundation of their emotional well-being. Self esteem is
an individual’s perceptions of self-worth, significance, and capableness” (Rosenberg, 1989, p. 26).

The physical counterpart to self-esteem is body-esteem. It is a construct that includes an individual's attitudes, evaluations, and feelings about their body. Overweight girls are dissatisfied with their weight and want to be slimmer. In addition, females generally have lower body-esteem than do males (Dwyer et al., 1969).

During adolescence, Latinas may experience body dissatisfaction, low self esteem and distress over their looks which can result in eating and overeating disorders (U.S. Office of Women’s Health, 2008). Latinas express the same or greater concerns about their body shape and weight as White females (U.S. Office of Women’s Health). Latina girls also report lower self esteem and less body satisfaction than girls from other racial and ethnic backgrounds (Strugel-Moore, & Smolak, 2000). During adolescence, Latinas can become frustrated, stressed and depressed. Girls’ depression is linked to negative feelings about their bodies and appearance (Orenstein, 1994).

During the transition from adolescence to young adulthood, girls encounter stereotypes and media messages that focus on appearance and sexual appeal. These messages limit opportunities for them to develop, to actualize their full potential and to value and respect themselves and others (Levin & Kilbourne, 2008). The assigned stereotypes and roles that girls receive that they are less valued than male continues to drive young girls to believe they are less important and less valued as human beings (Strugel-Moore & Smolack, 2000). As adolescent girls mature, they become more
aware of their bodies in terms of sexual attractiveness and attribute greater importance to their attractiveness than do boys. Consequently, girls experience greater concern about physical features that symbolize sexual attractiveness than do boys (Davies & Furnham, 1986). Finally, the role of popularity and attractiveness is a common theme of peer relationships and self-esteem issues within this adolescent population (American Psychological Association, 2009). Relationship building is essential to the adolescent’s self-confidence, self-image and interpersonal communication skills. Friendships however, can be accompanied with hurt, competition, rejection and confusion particularly as girls begin to negotiate dominant cultural views of sexual relationships, femininity, looks and beauty.

High self-esteem is crucial to the development of young adolescent Latinas as they must be able to have feelings of high self-worth, create healthy peer relationships and nurture healthy relationships with parents, and lastly, believe in her own ability to succeed academically (Rothenberg, 1996). Important factors in resistance to and liberation from negative cultural messages for adolescent girls include the following: a strong ethnic identity and close connections to family warmth, affection and emotional support. It is important for the adolescent Latina girls to challenge cultural stereotypes by learning positive messages about oneself, trusting one’s self as a source of knowledge and speaking with freedom and confidence (Advocates for Youth, 2009).
Culture and the Perfect Girl Syndrome

Researchers Brown and Gilligan (1992) and McDonald and Rogers (1995), attribute self image problems to the “perfect girl” or “nice girl” syndrome. According to these researchers, around the age of 10, many adolescent girls have internalized the messages and expectations that they have received into the ideal of the “perfect girl” who is pretty, kind, obedient and never has bad thoughts or feelings (Rothenberg, 1996). This perfect girl image and the desire to have authentic relationships come at a price, the loss of true self. Many young women begin their young lives with the ability to have a voice and speak their thoughts and desires, yet by adolescence, the need for authentic relationships and quest for popularity among peers takes control and causes these girls to conform to the image of the perfect girl (Brown & Gilligan). Fitting into this mold and losing sight of ones’ true self can be detrimental to the self image of these adolescent girls who are victims to the perfect girl syndrome.

Media and Culture

Gender stereotypes in television, movies, books and within the toy and fashion industry further perpetuates the perfect girl messages and can be harmful to young children and adolescents. Children learn at a very young age that their value is determined by their gender roles, appearance, body size and sexual appeal. These messages, aimed at young children continue into adolescence and can lead to serious problems in the later years, increasing objectification of women, eating disorders, emotional issues, depression, and sexual violence (Levin & Kilbourne, 2008). Stereotypical white beauty as the dominant message in the media for femininity
becomes impressionable in the minds of adolescent Latina girls. “An ideal of beauty which specifies one color of skin, one color of hair and blatantly discriminates against women who possess a range of skin and hair colors is pervasive in our society” (Everett, 2000) There are few models, in Teen and Seventeen magazines, that resemble Latina adolescent girls; although, the readership among this population is high (Everett). These stereotypical gender messages of thin, blue eyed, blonde hair being equivalent to beauty and popularity are impactful in the minds and perceptions of Latina adolescents.

Within the Hispanic media and culture, the desired beauty and physique ideal are personified in celebrities such as Jennifer Lopez, Shakira and Eva Longaria, as Latina idols blessed with the right curves, beautiful, fit and thin. Because these images are perceived as the ideal Latina figure among women, more and more Latina girls are striving for these bodies and looks. “The problem associated with this mindset is that many young adolescent Latina girls begin to develop curves at a younger age, giving them bodies like a woman, but still the mindsets of a child” (Blasewitz, 2006). This belief of “striving to obtain the ideal figure” (Blasewitz) may lead to skewed body image and the problems associated with poor self/body esteem.

In trying to keep up with the impossible demands of these unrealistic views of perfect feminine behavior, girls may suppress some of their ability to express anger or to assert themselves and they may begin to judge themselves through other’s eyes while questioning their self worth. (Brown & Gilligan, 1992, p. 197)
Gender Roles and Stereotypes in the Latino Culture

These themes of the perfect/nice girl syndrome are also prevalent within the Latino culture where the virgin/whore disparity exists. “The prevailing cultural and moral value demonstrates that a young Latina girl must be virgin like and if she is not, she may be considered a whore by her family and community” (Everett, 2000, p. 5). Rooted deeply in Catholicism, the Latina culture extends religious doctrine condemning fornication and promiscuity into society, morals and expectations (Everett). “One is either completely pure and symbolic of “La Virgin de Guadalupe or entirely disgraced” (Everett, p. 5).

The Impacts of Machismo and Marianismo

The “machismo cultural values” further perpetuate the perfect girl/virgin/whore syndrome as machismo heavily influences ideas of culturally acceptable, gender based sexual behavior for both Latino men and women. Machismo is a word used in Hispanic societies that describes an ideology or attitude toward sexism, where masculine superiority/chauvinism are “accepted.” Machismo is a deeply rooted ideology within the Latino family and culture. Machismo is based on historical patriarchy. The original definition of “machismo” includes qualities of gallantry, generosity, valor and charity. The Hispanic perspective of this behavior corresponds to attributes of knighthood. These attributes implied that a man has a noble education, ample resources to share and acquires self esteem through occupational and financial status (Guitierrez, 1990).
The Anglo, Non-Hispanic perspective of “machismo” implies physical aggression, sexual promiscuity, control and dominance of women and excessive use of alcohol (Aramoni, 1972). The source of these attitudes may be attributed to the Latino’s feelings of weakness, inadequacy, fear of abandonment, guilt and the psychological need to conquer these feelings through domination, control and regulation of women, wives and daughters with the goal of raising self esteem and reclaiming their power. The enormous class differences among the wealthy and poor within the Latin American countries and the lack of opportunities, disparities and feeling of inequality for many Latinos in the United States may reinforce demonstrated machismo behaviors that represent the Anglo, Non-Hispanic view of machismo (Aramoni).

The female counterpart to machismo is marianismo whose meaning is connected to the adoration of Mother Mary who is believed to be both virgin and the Madonna (Fiske, Ruciano, & Cyrus, 2005). According to this definition, Latinas are believed to be spiritually superior thus this strength can overcome pain and suffering (Fiske-Ruciano, & Cyrus, 2005). The female within the Latino culture is expected to be selfless dedicating her life to her husband, children and family. The Latino culture views the role of wife and mother with utmost respect.

From birth to adulthood, Latinas raised in a traditional environment may be subjected to roles of domesticity, child rearing and dutiful wife. These roles often reinforce the “machismo” behavior of males, while promoting female submission. Since women within the culture give birth and are expected to control the household,
teach and rear the children, these values are passed on to their daughters. In the quest to determine what defines a woman and what constitutes beauty, many Latina adolescents confront not only narrow definitions but also a range of discouraging consequences. Two conflicting dominant themes emerge: a focus on adolescence and a conflicting representation of femininity. The term femininity involves elements of gender, identity and standards of female appearance. “A maturing body signifies emerging sexuality which must be repressed, violated and censored” (Everett, 2000, p. 10).

Latina Adolescents and Bicultural Identity

Latina teens growing up between two different cultures may embrace elements of each, thereby developing a bicultural identity. At times, the norms and expectations of these two cultures can clash, creating tension between traditional parents and their bi-cultural children. Culturally-based tension between Latina youth and their parents may challenge the parent-child relationship. During pre-adolescence, girls are also struggling to reconcile their conflicting knowledge of equality and justice, and the demands for compliance placed on them at home and in school (Debold, 1995).

Community Poverty and Its Role in Obesity

The prevalence of obesity is significantly higher in poor communities than in wealthier communities, and it is higher among African Americans, Hispanics, and Native Americans than among whites. California is home to approximately 480,000 obese adolescents from all socio-economic levels, but low income is a significant disparity associated with the prevalence of obesity (Hassert, Babey, Diamant, &
Latinos living in the United States are disproportionately affected by poverty. In 2000, Latinos comprised 12% of the total United States population, and represented over 23% of those living in poverty (U.S. Census Bureau, 2000).

A circumstance of living in poverty is associated with increased stress, health risks, and unhealthy behaviors (Powers, 1992). According to research from the UCLA Center for Health Policy Institute (2008), low income teenagers are almost three times more at risk for overweight and obesity than teens from affluent households. In California, 21% of teenagers living in low income families are obese (Hassert et al., 2008). The interaction between race/ethnicity and community poverty indicates that race and ethnicity moderate the influence of community poverty on the prevalence of obesity (Thulitha, Wickrama, & Bryant, 2003). The percentage of children living in poverty is a key indicator of how well a community is caring and providing for it’s children. In Sacramento County, of the 45,925 Hispanics, 20% of children ages 2 to 12 were living in poverty (U.S. Census Bureau, 2007). The 2008 federal poverty guidelines for a family of four ranged from $20,650 to $41,300 (Sacramento County Children’s Coalition, 2008).

Children who grow up in poverty are more likely to lack the necessities of daily living: food, clothing, adequate housing, and healthcare, as well as access to safe environments. They are more likely to begin school with limited language skills and endure health and social problems that might interfere with learning (Sacramento County Children’s Coalition, 2008). Current research suggests that obesity is in part, socially structured (Young & Nestle, 2002). A multitude of individual factors such as
gender, race, ethnicity, family dynamics, lifestyle behaviors, and community socioeconomic conditions influence adolescent obesity (Cristol, 2003; Karlsen & Nazroo, 2002; Sanjay, 2000; Wang, 2001). More importantly, a growing body of community research suggests that socioeconomic characteristics uniquely influence health indicators and outcomes in youth (Wickrama & Bryant, 2003).

Access to Healthy Food

The influence of community poverty in adolescent obesity may impact and severely limit access to health, recreation, and nutritional resources in the community. Within poor underserved communities, often there is an excess of fast food and liquor outlets that provide low cost alternatives as opposed to more costly grocery stores and fruit and nutrition stands that may provide healthier nutritional resources that meet recommended dietary health needs (UCLA Center for Health Policy Research, 2008).

Many obese children live in what are called nutritional deserts, where there are few neighborhood supermarkets that provide access to fresh fruit and vegetables. Instead, families may rely on corner delis and bodegas, which tend to stock fattening, processed food, in part for economic reasons as these foodstuffs are cheaper and can sit on shelves indefinitely. (Walsh, 2008, p. 5)

“Between 1989 and 2005 the real price of fruits and vegetables rose 74.6 percent, while the price of fats fell 26.5 percent” (Walsh, 2008, p. 5). Supermarkets, where healthier choices are found, are three times as common in neighborhoods that are in the highest quintile of income as they are in communities in the lowest quintile (Timpero, Crawford, Telford, & Salmon, 2004). Families on fixed-limited incomes
with limited time from disadvantaged communities may often find it difficult to afford, plan and prepare healthy meals at home consequently they eat out more often.

**School Lunch Programs**

Most low income adolescents attending public schools participate in the government subsidized, free lunch and breakfast programs that are provided through their local school districts. For many of these middle school students, these meals may be their primary meal of their day. It is important that these meals are nutritional and provide the nutrients to support their wellbeing and learning. “More than 25 million students use the National School Lunch Program (NSLP) daily, while approximately seven million utilize the National School Breakfast Program (NSBP) daily” (U.S. Food and Nutrition Service, 2002). Meals from these programs may constitute more than half the daily caloric intake for children who participate in both programs, particularly for those from low-income families. Because such children have a higher prevalence of obesity during their adolescent years than do those with higher socioeconomic status, the provision of free or discounted meals through these programs may influence food intake among this group. “Currently, however, total and saturated fat contents of meals provided by most schools exceed the limits required by the National School Lunch Program and Breakfast programs” (Carter & Colin, 2002, p. 288).

**Access to Recreation and Physical Activity**

Poor, underserved communities may also lack access and availability to recreational services, safety and security required to meet the demands of regular
physical activity (Ross & Mirowsky, 2001). Parents may be concerned about neighborhood safety, strangers and stray dogs promoting a decreased amount of time spent in outdoor and after school play. Adolescents in low income households are less likely to engage in physical activity and more likely to participate in sedentary behaviors than adolescents in high income households (California Health Interview Survey, 2005).

Community Norms, Values, and Role Models

Community poverty may influence adolescent obesity through the erosion of community norms and values (Wickrama, & Bryant, 2003). Often in poor communities, the importance of self care management and healthy dietary practices are not valued or conveyed to the community. Poor teens who live in neighborhoods with twice as many fast food restaurants are more than twice as likely to dine out in these restaurants with their families (UCLA Institute for Health Policy Studies, 2008). Moreover, socio-economically disadvantaged parents are more likely to transmit their unhealthy behaviors (e.g. unhealthy eating behaviors, lack of exercises) and risky-lifestyles to their offspring (Wickrama, & Bryant).

Adolescents in disadvantaged communities are less likely to find positive role models that support and promote healthy nutrition, lifestyle, physical activity, and academic achievement. Instead, the emergence of “health-related subcultures” in disadvantaged communities increases the community level tolerance for risky lifestyles, obesity, and being overweight (Browning and Cagney, 2004; Kowaleski-Jones, 2000).
Influence of Parents’ Lifestyle and Behaviors

In spite of their growing independence, adolescents are influenced by their parents lifestyles and behaviors (UCLA Institute for Health Policy Studies, 2008). Adolescent’s poor eating patterns and habits have been linked to the eating patterns of their parents. Adolescents whose parents eat more fruits and vegetables themselves drink less soda and eat fast food less often (Diamont, Babey, Jones, & Brown, 2009). Communal eating together as a family at home has been associated with better dietary behaviors and lower rates of obesity. Parents can impact their children’s dietary habits positively by serving as role models and providing healthy food choices in the home environment (Diamont et al., 2009).

Heredit, Weight, and Chronic Disease

The 1984 Hispanic Health and Nutritional Examination Survey (HHANES) of the National Center for Health Statistics (NCHS) in Washington, D.C. demonstrated that Hispanics, like most ethnic groups, have distinct patterns of physical growth and development. The HHANES study described a population with a tendency toward short stature, a high incidence of overweight and obesity, and consequently, an elevated risk of weight-related problems such as diabetes and heart disease (Powers, 1992, p. 11). “The role that diet and lack of exercise plays in obesity prevalence within this the Hispanic population is critical however the slowdown in height and metabolism may also be linked to heredity and genetics” (Powers, 1992, p.11). Scientists are now trying to determine whether these patterns are determined by
environmental influences, such as diet and lifestyle, by genetics, or by both (Powers, 1992).

The HHANES study (U.S. Department of Agriculture, 1984) provided the first comprehensive report of the health and nutrition of Hispanics in the United States. The research compared developmental statistics for Hispanic children from ages two to seventeen years with data from an earlier National Children’s Health Study survey which included non-Hispanic white children and with NCHS reference curves, which are widely used to assess the growth of children (Powers, 1992, p. 11). The HHANES study revealed that, until about age 12, the heights of Hispanic children compared favorably with non-Hispanics. In adolescence and adulthood however, the average height decreased to below the 25th percentile while the weight to height ratio increased. As a result, Hispanic teens and adults are generally shorter and heavier for their statures than their non-Hispanic counterparts (Powers, p. 11). Scientists are not certain, however, whether the decrease in the growth rate that begins in adolescence is due to poverty and poor nutrition or is genetic in nature (Powers, p. 11).

*The Influence of Heredity on Obesity*

Theoretically, children of obese parents are at greater risk of becoming obese because of both shared genetic factors and within-family environmental factors (Faith, Rha, Neal, & Allison, 1999). Parental obesity has generally been found to prospectively predict onset of offspring obesity in adulthood Adolescent obesity also dramatically increases the risk of adult obesity (Whitaker, Wright, Pepe, Seidel, & Dietz, 1997). Overweight adolescents have a 70% chance of becoming overweight or
obese as adults (Sacramento County Children’s Coalition, 2008). This trend is alarming because being overweight or obesity in adulthood has resulted in 400,000 deaths annually in the United States (Mokdad, Marks, Stroup, & Gerberding, 2004).

Adolescent Obesity and Associated Chronic Diseases

Adolescent obesity is associated with serious medical problems, including high blood pressure, adverse lipoprotein profiles, diabetes mellitus, atherosclerotic cerebrovascular disease, coronary heart disease, colorectal cancer, and death from all causes, as well as lower educational attainment and higher rates of poverty (Dietz & Robinson, 1998). Other physical conditions that may be associated with adolescent obesity include liver disease, orthopedic problems, sleep apnea, asthma, osteoarthritis and early menarche, a recognized risk for breast cancer (California Medical Association Foundation, 2008). Additionally, the psycho-social impact of adolescent obesity includes social stigmatization, low self esteem and poor body image which can potentially lead to future eating disorders, depression and mental health issues (Robert Wood Johnson Foundation, 2008).

As teens become obese, they begin to experience many of the problems which were once the domain of obese adults such as Type II diabetes. According to the American Heart Association, approximately 53% of Hispanic girls are likely to develop Type II diabetes during their lifetime. Diabetes is a proven risk factor for heart disease, high cholesterol, elevated triglycerides and hypertension. These conditions may lead to heart attacks, strokes, congestive heart failure and arteriosclerosis, hardening of the artery walls (California Department of Public Health,
"It is estimated that between 70% of obese children will become obese adults" (Parsons, Power, Logan, & Summerball, 1999). This precursor condition for adult obesity is a critical public health threat because of the association with several chronic diseases. Adult onset conditions such as cardiovascular disease, congestive heart failure, osteoarthritis, gall stones, and female infertility have all been linked to increased incidence among individuals who were obese during childhood (Robert Wood Johnson Foundation, 2008a). The rapid increase in the prevalence of obesity suggests that psychological and behavioral factors, rather than biological factors, may be primarily responsible for this trend (Wadden, Brownell, & Foster, 2002).

Rates of obesity are greater for women than men and adolescence is a high-risk period for obesity onset (Wing & Mullen, 1993). To combat this trend, most experts advocate early intervention and the promotion of healthy dietary patterns and greater physical activity opportunities through school based programs, recreational activities and educational programs for the population at large. Surprisingly, there have been relatively few prospective studies on the risk factors that predict onset of adolescent obesity. A risk factor is a variable that has been shown to prospectively predict onset of an adverse outcome among individuals who are initially free of the condition (Kraemer et al., 1997). Regardless of the causes and risk factors, the prevalence of overweight and obesity among Hispanic Americans presents serious health risks. The low median age of the Hispanic population has health officials concerned that as they age, Hispanics will suffer increased incidences of obesity-related disease and put additional strains on public health resources.
Culture, Diet, Lifestyle, and Behavior

The effects of culture, diet, lifestyle, and acculturation play a critical role in the Hispanic populations’ tendency toward overweight. Most of the components of the traditional Hispanic diet complex carbohydrates—tortillas and other corn products, breads, and beans—are considered to be nutritional and healthy. The heavy consumption, however, of meat, fats, oils, and sugar by this population are the real problem. Research shows that a diet low in sugars and fats and rich in fruits, vegetables and whole grains can help reduce the risk of serious health conditions, chronic diseases: heart problems, Type II diabetes and many common cancers dramatically affecting Latinos (Sacramento County Children’s Coalition, 2008).

Some researchers feel that “there is a preference for a certain level of fatness in Hispanic cultures that may make some individuals consciously seek to attain a certain body type” (Douchis et al., 2001, p. 68). The Hispanic cultural perception of female beauty does indeed include a fuller figured female with many Hispanic mothers embodying the philosophy of “a chubby baby is a healthy baby” (Walsh, 2008). These ingrained cultural messages transcend from infancy to adulthood. Within the Latino culture, acculturation plays a significant role on body size preference and self image. “Heaviness is seen as a sign of affluence, wealth and success in some traditional Hispanic cultures: but as Hispanics acculturate to the standards of beauty in the United States, they are more likely to prefer a smaller body size” (Lopez, Blix, & Blix, 1995, p. 3).
High levels of acculturation are associated not only with a drive for thinness but also with less healthy eating behaviors. “As a result, second and third generation Hispanic adolescents are more likely to be obese than their first generation peers” (Dounchis et al., 2001, p. 68). Many Hispanic children have poor eating habits. The HHANES Study (1984) indicates that the diets of many Hispanic children and adolescents are deficient in some of the important food groups, specifically fruits and vegetables. Every day, over two million California adolescents, 62% drink soda and 1.4 million, 43%, eat fast food; however only 38% consume at least five serving of fruits and vegetables (Babey, Jones, Yu, & Goldstein, 2009).

**Fast Food and Soda Consumption**

Many studies have indicated that Hispanic children are the biggest consumers of fast foods and sugary sodas as compared to all ethnic groups. High consumption of fast food and soda and habitual low-intake of fruit and vegetables may put Hispanic children at risk for malnutrition, chronic disease and childhood obesity (Dounchis et al., 2001). According to the California Center for Public Health, there were more than five times as many fast food restaurants and convenience stores than supermarkets and produce vendors in the County of Sacramento with a preponderance of these establishments situated in low income Hispanic neighborhoods (Sacramento County Children’s Coalition, 2008). Within these areas, there is easy access to processed, high fat and fast foods but not always access to fresh produce and affordable healthy foods.

High fat foods are thought to be a particularly powerful predictor of weight gain because of the efficiency with which fat is metabolized and its high caloric
density and palatability (Golay & Bobbioni, 1997). The energy balance model of adiposity stipulates that weight gain occurs if caloric intake exceeds energy expenditure. Thus, elevated caloric intake should predict obesity onset (Rosenbaum, Leibel, & Hirsch, 1997). Consumption of high-fat foods, sodas and sugar sweetened drinks has been linked to higher caloric intake, reduced consumption of fruits and vegetables and excess weight gain. According to the Robert Wood Johnson Foundation (2008), caloric intake has increased by 4% in adolescent girls, ages 12-15 and 15% in females ages 16-19 over the past 20 years. The portion size of high calorie and fast foods has become supersized. Adolescent teen girls are not eating the FDA recommended portions of grains and the seven to nine required servings of fresh fruits and vegetables daily. Instead, they are substituting them for convenient, non-nutritious high fat, high sugar foods, thus raising their risk for overweight and obesity (UCLA Center for Health Policy Research, 2008).

Finally, adolescents clearly are not drinking enough milk or water. From 1977-2001, adolescent’s consumption of milk decreased by 39% while their consumption of fruit juice rose to 5%, fruit drinks increased to 69% and soft drink intake increased by 137% (Robert Wood Johnson Foundation, 2008). The typical teen consumes two 12 ounce cans of soft drinks, containing 300 calories and 20 teaspoons of sugar daily (Robert Wood Johnson Foundation, 2008). Between 2003-2007, the California legislature affirming the adverse effect of sugary drinks on children’s health passed a law that prohibited the sale of soda products at public elementary, middle and high schools (Sacramento County Children’s Coalition, 2008).
The Importance of Breakfast

Skipping breakfast contributes to the development of overweight and obesity (Elgar et al., 2005). Youth who skip breakfast have been shown to eat more food later in the day than those who eat breakfast (Siega-Riz, Carson, & Popkin, 1998). In addition, adolescents who skip breakfast may also consume more high-fat snack foods throughout the day (Ritchie et al., 2001). “A study of more than 2,000 teens in the Minneapolis-St. Paul area found that Teens who eat breakfast regularly tend to weigh less than those teens that skip the meal” (Pereira, 2008, p. 641). “Teens who eat breakfast also exercise more as well as consume an overall healthy diet” (Pereira, p. 642). “Adolescents who ate breakfast are much more physically active and have lower fat intake, lower cholesterol and higher fiber intake” (Pereira, p. 642). The study reported that approximately 25% of the nation's teens skip breakfast. Adolescents who skipped breakfast, weighed as much as five pounds more on average than the teens who ate breakfast every day. Research suggests that breakfast helped teens control hunger, and kept them from binging at lunch and dinner (Pereira).

Binge Eating

Binge eating might also play a particularly insidious role in obesity promotion because it punitively leads to physiological changes that increase the likelihood that binge eating will persist over time. “Research suggests that binge eating results in an enlarged stomach capacity” (Geliebter, 1992, p. 656). Conversely adolescent girls with higher scores on dieting scales are at increased risk for future onset of obesity and weight gain (U.S. Office of Women’s Health, 2008).
Physical Inactivity and Its Role in Obesity

Regular physical activity for adolescents contributes to building and maintaining healthy bones and joints, controlling weight, building lean muscle, reducing fat, and preventing or delaying the development of high blood pressure (U.S. Department of Health and Human Services, 1996). Current recommendations for physical activity for children and adolescents include engaging in at least 60 minutes of physical activity on preferably all days of the week (Koplan & Dietz, 1999). Leading researchers suggest that modern industrialization resulting in less physical activity and more sedentary behavior may explain many of the underlying reasons for the increase in pediatric obesity and the obesity epidemic among adolescents (U.S. Department of Health and Human Services, 1996).

Sedentary Activity: Television, Computer, and Videogames

One of the primary causes of teen obesity is the sedentary lifestyles youth have become accustomed to with television and the evolution of video and computer games. Low levels of exercise and high rates of sedentary behaviors also have predicted increases in body mass during adolescence (Dietz & Gortmaker, 1985). Sedentary behavior has been monitored as the number of hours of watching television and has been associated with being overweight and obese (Robinson, 1999). A survey of children ages 8 to 16 years old demonstrated a positive association between hours of television viewing and prevalence of obesity (Crespo et al., 2001).

The American Academy of Pediatricians estimates that the average child in the United States watches three to four hours of television daily and that these children
have a significantly greater BMI than children who watch two hours or less (Robert Wood Johnson Foundation, 2008). These statistics do not account for the long hours spent daily by children and adolescents on electronic and video games. Children with higher weight status played moderate amounts of electronic games, while children with lower weight status spent very little time engaged in playing electronic games (Vandewater, Shim, & Caplovitz, 2004). A recent Neilson Media Research Study (1999) revealed that children spend an average of six hours and 32 minutes per day on combined media which includes television, videos and video games (California Medical Association Foundation, 2008). Additionally, children are constantly bombarded with high calorie snack food advertisements during their television viewing time which promote unhealthy eating behaviors.

Physical Activity: Recreation, Environment, and Safety

Over the past 40 years, changes in the environment have promoted sedentary lifestyles and behaviors in our youth. In many low-income, underserved neighborhoods, the lack of sidewalks, long distances to schools, crossing busy streets and heavy traffic discourages walking, biking and other physical activity (Sacramento County Children’s Coalition, 2008). Researchers estimate that while more than two-thirds of all children walked or biked to school as little as 30 years ago, that number has now plummeted to less than 10% in society today (Robert Wood Johnson Foundation, 2008a). Nearly one-fourth of all children do not engage in free time physical activity and many children, especially those from low income families may lack access to parks and safe places to play. Other children are confined indoors
deluged with homework or instructed to stay inside until their working parents return home (Sacramento County Children’s Coalition, 2008).

*Physical Activity in the School Environment*

The association between school, peer and family support and physical activity levels in adolescents is well established (Strauss, Rodzilsky, Burack, & Colin, 2001). Adolescent girls' perceptions of support for physical activity in the school environment are critical and very important to obesity prevention. Most adolescents spend significant amount of time at school and many opportunities for physical activity such as physical education and school-based sports take place within the school setting. Physical education is an important contributor to total physical activity levels of adolescent girls. A study found that physical education accounts for 11% of the total daily steps taken for sixth-grade girls (Tudor-Locke, Lee, Morgan, Beighle, & Pangrazi, 2006).

Unfortunately due to economic challenges faced by many schools, the availability of physical education classes have been transformed from a necessity to a rare opportunity. Due to budgetary priorities, many schools have eliminated or reduced their physical education programs. In many middle schools throughout California, recess and lunch periods have become substitutes for the physical education period. The National Association for Sports and Physical Activity recommends 225 minutes of physical education, five days per week for middle school and high school students (California Endowment, 2007). The 2005 U.S. Dietary Guidelines recommend that adolescents receive 60 minutes of physical activity, five
days per week (Hassett et al., 2008). The California Department of Education however, requires only 200 minutes of physical education each 10 days, which is far below that which is needed for these growing adolescents. Approximately 23% of middle schools in the State of California are non-compliant with this requirement (California Endowment).

*Physical Activity and Gender Issues*

While obesity and high levels of physical inactivity are problems affecting both adolescent girls and boys, there are gender-specific issues of great concern facing girls. During adolescence, girls experience higher levels of inactivity and a steeper decline in physical activity.

Data from the 2003 Youth Risk Behavior Surveillance Survey shows that vigorous physical activity in girls declined about 30% between 9th and 12th grades (Grunbaum et al., 2004). Additionally, there is a greater prevalence of inactivity among black and Hispanic girls than among white girls (Centers for Disease Control and Prevention, 2003). Girls are less likely to participate on organized sports teams than boys, which may in part contribute to this decline.

Approximately six out of ten children age nine to thirteen do not participate in any kind of organized sport and children of parents with lower income and lower educational levels, are even less likely to participate. Nearly 23 percent do not engage in any free time physical activity” (National Center for Health Statistics, 1999-2001).

In addition, girls view themselves as less athletic than boys (Garcia et al., 1995).
Hispanic girls who were at risk for being overweight participate on fewer sports teams than Non Hispanic white girls who were normal weight (U.S. Office of Women’s Health, 2008). Participation in sports has been associated with lower rates in prevalence of overweight in female youth (Elkins, Cohen, Koralewicz, & Taylor, 2004) and subsequent lower rates of obesity in adult women (Alfano, Keleges, Murray, Beech, & McClanahan, 2002). The AAUW (1999) found extra-curricular activities and participation in sports encourage teamwork, responsibility, physical strength and stamina, competition, diversity, and feelings of culture and community.

Summary

Obesity has been identified as the most prevalent chronic health problem affecting our adolescent youth today. The rapidly increasing population of poor and low income Latina adolescents due to their unhealthy lifestyles and many cultural, psychological and sociological factors are considered to be the most at risk population for overweight and obesity.

The adolescent years are a time of transition when young girls experience many physiological and psychological changes that impact body image, self-concept, self esteem, and peer relations. During adolescence Latinas are challenged to come to terms with the stages of puberty that include weight gain and the physical and emotional transformation from adolescent to young female. As adolescent Latinas attempt to reconcile the reality of their bodies with the unrealistic and unattainable cultural demands for female thinness and the ideal body of mainstream America, a dichotomy and conflict arises between their Hispanics culture’s perception and
expectations of beauty and weight and that of mainstream America. “The problem associated with this mindset is that many young adolescent Latina girls begin to develop curves at a younger age, giving them bodies like a woman, but the mindsets of a child” (Blasewitz, 2006, p.1).

In the quest to determine what defines a woman and what constitutes beauty, two conflicting themes emerge for Latina youth, the focus on adolescence and the conflicting values and expectations of femininity, and sexuality within their culture. The norms and expectations related to perceptions of gender roles, femininity, beauty, sexuality and the perfect girl image may clash causing culturally based tension between the parent and child. These cultural factors can directly impact self-esteem and self-confidence within this vulnerable adolescent population which may result in skewed body image, overweight and obesity.

Current research suggests that obesity is in part socially structured. (Young & Nestle, 2002) and that there are a multitude of factors such as gender, race, ethnicity, family dynamics, lifestyle behaviors and community socioeconomic conditions that influence adolescent obesity (Cristol, 2003; Karlsen & Nazoo, 2002; Sanjay, 2000; Wang, 2001). Community poverty is associated with increased stress, health risks, unhealthy behaviors and lifestyles that may promote poor health outcomes, and the prevalence of chronic disease and overweight and obesity in low-income Latina adolescents.

The influence of community poverty in adolescent obesity may include barriers to food access, quality and recreational resources. Due to economic hardship
and the emergence of nutritional deserts within poor and low income communities, youth and their parents are choosing to consume the less expensive high fat, sugary, convenience and fast food as opposed to healthy food, fresh fruits and vegetables. Community poverty influences the adolescent’s access to recreation and physical activity as low income communities may lack the infrastructure and community design to provide safe outdoor spaces, sidewalks, parks and indoor recreational facilities.

The community infrastructure reinforces unhealthy behaviors related to diet and sedentary activity which is a significant factor to overweight and obesity within low income Latino communities. Often in poor communities, the importance of self care management and healthy behaviors are not understood, valued or conveyed to the community. Adolescents in disadvantaged communities are less likely to find positive parental or community role models that promote healthy nutritional behavior and physical activity, instead “health related subcultures” emerge where adolescents behaviors are influenced by the community norms and unhealthy behaviors and lifestyles exhibited by their parents.

Adolescent obesity is associated with serious medical problems including, diabetes, high blood pressure, cholesterol, heart disease and early menarche (a recognized risk for breast cancer). Research shows that a diet low in sugar and fats and rich in fruits, vegetables and whole grains can help reduce the risk of chronic diseases: Type II diabetes, heart problems and many common cancers affecting Latinas today (Sacramento County Children’s Coalition, 2008).
The effect of culture diet, lifestyle and acculturation plays a critical role in the Hispanic population’s tendency to becoming overweight or obese. High levels of acculturation are associated with less healthy eating behaviors. Poor nutritional habits and behaviors greatly contribute to the epidemic of obesity within the adolescent Latina population. Hispanic children are the biggest consumers of fast foods and sugary sodas as compared to all ethnic groups. These unhealthy choices have replaced fruits, vegetables and proteins that contain nutrients required for physical health, mental alertness and well-being.

Regular physical activity for adolescents contributes to building and maintaining health bones and joints, controlling weight, building lean muscle, reducing fat and prevention or delaying the development of high blood pressure and associated chronic conditions (U.S. Department of Health and Human Services, 1996). The role of physical activity in and out of school is critical to socialization, self-esteem, learning and obesity prevention.

Leading researchers suggest that modern industrialization resulting in less physical activity and more sedentary behavior may explain many reasons for the increase in pediatric obesity and the obesity among adolescent Latinas. (U.S. Department of Health and Human Services, 1996). Adolescent girls perceptions of support for physical activity within the school environment is important to obesity prevention. During adolescence, girls experience steeper declines in physical activity levels. Latina adolescents who are at risk for being overweight participate on fewer organized sport teams than their peers. Latina adolescents’ engagement in
extracurricular activities and participation in sports can promote teamwork, individual and group responsibility, physical strength, endurance, and a sense of culture and community.
Chapter 3

METHODOLOGY

Study Design and Data Collection

Though this quantitative study within a larger ethnographic research project, the researcher seeks to understand the underlying causes and reasons for obesity within the Latina adolescent population and its effect on self esteem and body image within this population. This chapter provides an overview of the methods, study participants, research setting, and the procedures that were used to conduct the study which involved surveys, Likert scales and quantitative research methods. It describes the reasons behind the research methods that were used for the study. It portrays the process used to measure weight and body mass index within the study group. It classifies the study participants by weight and divides them into two groups those participants who were healthy, normal weight and those participants who were overweight, or obese. It provides a description of the survey method and an overview of the survey questions.

The survey focused on the multitude of factors to obtain a balanced overview and honest, unbiased assessment of the issues related to overweight, obesity and self esteem. The many contributing factors to this epidemic were the main focus of the study and the survey data. Upon completion of the thesis, recommendations addressed the target problems and issues of prevention of obesity in Latinas today.
Research Questions and Hypothesis

The primary educational research question was: “What are the factors in a convenience sample of pre-pubescent Latina girls that contribute to the overweight and obesity epidemic in this population?” The secondary educational research questions were:

1. What is the current profile of overweight and obesity in adolescent Latinas?
2. What is the prevalence of overweight and obesity in adolescent Latinas within Sacramento and Stanislaus Counties?
3. What is the impact of weight and obesity on psychological factors specifically self esteem, body image and self-confidence within this population?”
4. Are heredity, genetics body structure and co-morbid diseases (diabetes) a factor?
5. What role does education and social economics play in perpetuation of the problem?
6. What role do cultural factors, parents, family structure and culture have in the problem?
7. How does food choice and physical activity levels impact the issues of obesity and overweight with the adolescent Latina population?
8. What interventions and community solutions can be implemented to address the problem?
Research Instruments

A survey was designed that measured attitudes and behavior related to nutritional choice, physical activity, culture, self-esteem and body image of adolescent Latinas. Additionally, the survey assessed the association of poverty, heredity, co-morbid health conditions, culture, education, and socioeconomic status and their impact on overweight and obesity within the Latina adolescent population. The survey utilized a five point Likert scale starting with strongly agree (5) to strongly disagree (1) and included definitive “yes” and “no” questions and quantifiable answers (see Appendix A).

The Self Esteem, Body Image section of the survey was designed to assess the participant’s self concept, body image, and the influence that weight and peer pressures may have on self-esteem. The researcher used her own questions integrated with some questions from the Rosenberg Self Esteem Scale, which has become the most widely used self-esteem measure in social science research (Rosenberg, 1989). Much of Rosenberg's work examined how social structural positions like race or ethnicity and institutional contexts like schools or families relate to self-esteem. At least four key theoretical principles: reflected appraisals, social comparisons, self-attributions, and psychological centrality underlie the process of self-concept formation (Rosenberg). The researcher used three questions from the Rosenberg Self Esteem Scale which included: “I feel that I have a number of good qualities.”; “I am able to do things as well as most others,” and “On the whole I am satisfied with my body” (Rosenberg, 1989).
The remaining 42 questions on the survey were designed by the researcher. The survey was designed with the intention of testing the hypothesis that community poverty, culture, society, environmental and lifestyle indicators impact this critical health issue, consequently affecting self esteem, body concept and co morbid health conditions among Latina adolescents who are at risk for overweight and obesity.

The survey utilized a five point Likert scale starting with strongly agree (5) to strongly disagree (1) and included definitive “yes” and “no” questions and quantifiable answers (see Appendix A). “The Likert Scale method, which was invented by the organizational- behavior psychologist Dr. Linsis Likert, ascribes quantitative value to qualitative data, to make it amenable to statistical analysis” (Wikipedia, 2009). For this survey, a numerical value was assigned to each potential choice and a mean figure for all the responses was computed at the end of the evaluation or survey. The final average score reflected the participants’ overall level attitude or feeling toward the questions asked on the topics of self esteem, culture, peer influence, physical activity, diet, lifestyle, and behavior.

The quantitative research method was the most effective method as the variables can be isolated, the extraneous variables can be controlled and the researcher was able to use a standardized procedure to analyze and draw conclusions from the data (Leedy & Ormrod, 2001). The surveys were designed using a quantitative research method with the intention of testing the hypothesis. The hypothesis that guided this study was that community poverty, culture, society, environmental and lifestyle indicators impact this critical health issue of obesity. The consequences of
obesity include decreased self esteem and body concept among Latina adolescents. The increased risk of co-morbid health conditions can have a dramatic effect on future poor health outcomes for those adolescents who are at risk for overweight and obesity.

At the beginning of the survey process, health educators conducted a body fat test assessment or utilized a self report method for obtaining height and weight. The Body Mass Index test (BMI) is the most common and quickest method for assessment of weight categories, underweight, normal weight, overweight, or obese, that may lead to future health problems. The health educator used three methods, depending on the participant’s receptivity and site accessibility to obtain the BMI measurement.

The first method of measurement involved the hand held body mass calculator electrical machine that measures how much fat you have on your body compared to lean mass in forms of muscle, bone and organs. The participant’s age, height and weight was digitally input into the machine. The participant held the machine at arm’s length with both hands for approximately one to two minutes until the reading for BMI appeared on the screen. The second method used to determine the body mass index of the participants was measuring weight using a bathroom scale and height using a tape measure against a wall. Weight was measured without shoes on to the nearest quarter pound using a standard scale. Height was measured to the nearest quarter inch using a tape measure/wall marking. The BMI was calculated as weight in pounds and it’s relation to height in inches.

Within the public settings of the flea market and community centers, it was difficult due to receptivity, space or restriction to administer the BMI assessment using
the above method. The researcher, in these environments utilized a third method to obtain the BMI through self report where the respondent with the help of the parent in attendance provided their weight and height. Upon completion of methods two and three, the researcher used the BMI Wheel approved by the United States Center for Disease Control to calculate BMI and body fat percentage of the individual participants. The first form of measurements was the most appropriate to be used as a baseline for the study. The second and third measurement assessment, however may have been less accurate as it relied on self report method. It required additional time for manual calculation in comparison to the hand held body mass calculator which automatically provided a reading.

Because of the ease of assessment of the BMI, it has been recommended as the measure of choice for epidemiologic research (Dietz & Robinson, 1998). Adolescent obesity is defined using the age and sex adjusted 95th percentiles of BMI, based on nationally representative data, as recommended by Barlow and Dietz (1998). Categorical variables will be created to represent weight status for adolescents. From the Center for Disease Control (2000) growth charts for children, the cut point for “obese” is equal to or the 95th percentile of the distribution. The cut point for “at risk of overweight” is equal to or between the 85th to 95th percentile, and the cut point for “normal weight” is equal to or below the 85th percentile (Kuczmarski, Ogden, & Gummer-Strawn, 2000).
### Table 1

*United States Center for Disease Control Growth Charts, 2000*

<table>
<thead>
<tr>
<th>BMI Percentile</th>
<th>Nutritional Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5th Percentile</td>
<td>Underweight</td>
</tr>
<tr>
<td>5th – 84th Percentile</td>
<td>Healthy Weight</td>
</tr>
<tr>
<td>85th - &lt; 95th Percentile</td>
<td>Overweight*</td>
</tr>
<tr>
<td>≥ 95th Percentile</td>
<td>Obese**</td>
</tr>
</tbody>
</table>

### Participants

The participants for this study included 50 Latina girls ages 10-15 years who were attending fifth through ninth grades. The demographic profiles, which included country of birth, language spoken in the home, age, and grade of the girls participating in the study are shown in Figure 1 (see Chapter 3). Latina adolescent girls were chosen for the purposes of this study as this population in California demographically is rapidly increasing and is critically at risk. The ages 10-15 years were selected for this
study as the pre-puberty years are impressionable years when adolescents seek affirmation and a feeling of belonging while pursuing their individuality. During these pre-puberty years, Latinas may experience diminished self esteem, depression, peer pressure and challenges with the physical transformation of adolescence to adult female. Consequently as Latina girls mature, they become more aware of their bodies in terms of sexual attractiveness and more concerned about their looks and body image.

The surveys for this study were anonymous and randomly administered to the 50 preteen adolescent Latinas by a health educator in a public flea market, community center or health fair setting that targeted at risk/low income Latino populations within the Greater Sacramento and Stanislaus Counties. These regions were selected for the study as compared to California averages, both counties exceed the state averages for prevalence of overweight and obesity in the Latina adolescent population (Sacramento County Group Needs Assessment, 2008; Stanislaus Group Needs Assessment, 2005). In most cases the researcher read the question to the survey participant. This was the most time efficient method of data collection for both the participant, parent and the researcher.

Setting

The neutral sites chosen for this ethnographic study were flea markets and health fairs in community park setting where the researcher had no vested interest in the outcome of the study (Leedy & Omrod, 2001). These sites were chosen as they were consumer friendly, accessible, convenient and heavily utilized by the target
population of low income Latino families, adolescents and children. “The researcher, as an observer, interviewer and listener engaged in participant observation utilizing a ‘big net approach’ intermingling with everyone and getting an overall sense of the cultural context” (Leedy & Omrod). Upon careful observation of the setting and the family dynamics, the researcher approached key informants to participate in the study. The researcher would approach the parents and families accompanied by a native Latino and Spanish speaker to seek the parent’s and adolescent’s trust and secure consent for their participation in the study.

Procedure

The survey administration and height and weight assessment required approximately 15 to 20 minutes of the participant’s time. Each participant’s parent received a Human Subjects information form and was orally requested to sign a master consent form for permission to interview their child. Since, most of the parents of the surveyed participants spoke only Spanish, the researcher utilized a translator to explain the purposes of the survey to participants’ parents and obtained oral consent and written signatures by parents for participation. Since the survey was conducted in an informal setting and in most cases due to privacy, fear of sharing personal information and immigration issues, the researcher asked parent’s for participation and obtained only their signatures for consent. The form described the researcher’s background and the purpose of the study. The researcher provided incentives water bottles, t-shirts, and pedometers to the respondents who participated in the survey process.
When the surveys were collected, they were sorted based on the Center for Disease Control’s BMI guidelines for those participants that were normal, healthy weight, and those who were overweight and obese. The sample consisted of 50 surveys that included 27 participants who were overweight or obese and 23 participants who ranges could be classified as low healthy/normal weight. The data from these surveys were statistically analyzed using the SPSS tool to obtain an overall picture of the entire sample consisting of 50 participants with frequencies for the 45 variables. A T-Test was used to measure differences and similarities among the variables.

The survey examined the effect that demographics, culture, heredity, poverty co-morbid conditions have on obesity risk and self esteem. In the first 20 questions, the survey obtained information on demographics, culture, language, social economics, education, health status, co-morbid conditions and family decision making structures. Some of these questions included: “Where were you born?” “Where were your mother and father born?” “What language do you speak at home?” “What is your father’s work?” Who in your house does the cooking” and “Do any of your family members have diabetes, depression, overweight, or heart issues?” The questions: “What is your weight?” and “What is your height?” were answered through the BMI and height and weight measurements or self report method.

The survey used a quantitative research model for questions 20 to 35 that included a five point Likert scale. The girls were asked to rate themselves from (1) strongly disagree, (2) disagree, (3) undecided to (4) agree and (5) strongly agree in
responding to 15 specific statements regarding their feelings about self-concept, appearance, body image and the influence that peers have on their perceptions of themselves and their self esteem. Some of these questions included: “On the whole, I am satisfied with myself;” “I feel that I am pretty or cute;” “I have a good personality;” “I think that I am too fat;” and “I have been teased because of the way that I look.” The researcher, during the survey process realized that the order of the questions on the self esteem section were primarily in the positive pertaining to questions 20 to 26 while questions 27 to 34 were framed in the negative. To reduce bias or participant’s guessing the researcher’s hypothesis, the questions were administered orally and the order of the questions were administered randomly.

The final section of the survey, questions 36 to 50 measured lifestyle, attitudes and behaviors corresponding to physical activity opportunities, nutritional habits and sedentary activities. The questions to assess frequency and levels of nutritional behavior and physical inactivity included: “How many cups of fruits and vegetables do you eat a day?” “How often do you eat school lunch?” How often do you eat fast food?” “How many minutes of physical education at school do you engage in each day?” and “How much time do you spend watching television or playing video games each day?” Finally, upon completion of the survey process, the participants and their parents were provided with bilingual printed health education materials related to nutrition, weight management, chronic disease prevention and physical activity.
Conclusion

This chapter provided a description of the quantitative research model that was used to conduct the research study. The goal of the study was to answer the primary and secondary research questions: “What are the factors in a convenience sample of pre-pubescent Latina girls that contribute to the overweight and obesity epidemic in this population?” and “What is the impact of weight and obesity on psychological factors specifically self esteem, body image and self-confidence within this population?” Within this chapter, the study participants, research setting, and the procedures that were used to conduct the study are described. The survey used “yes” and “no” questions and the Likert scale evaluative measurement. The survey questions were designed by the researcher with integration of questions from the Rosenberg Self Esteem Scale. The data from these surveys were statistically analyzed using the SPSS tool to obtain an overall picture of the entire sample consisting of 50 participants with frequencies for the 45 variables. A T-Test was used to measure differences and similarities among the variables. The instruments used to measure body mass index included a hand held measurement device, bathroom scale, and self report method against the participant’s height measurement. This process allowed the researcher to classify the adolescent group of girls into two groups, those who were healthy, normal weight and those who were overweight or obese.

Though this study focused on the critical factors that influenced and are the foundation of the problem, the surveys used in this study focused on the multitude of factors to obtain a balanced overview and honest and unbiased assessment of the
factors related to overweight and obesity from the surveyed participants. The survey data addressed the target problem and critical issues of education and prevention of overweight and obesity in Latina adolescents.
Chapter 4

FINDINGS

This chapter provides the research study findings and results of the participant’s responses to the survey. The first sections of the research findings portray the participant’s and their parent’s demographic profile based on ethnicity, language, education, employment and social economic status. The culture, gender roles and decision making responsibilities are assessed. The study participant’s and their parent’s co-morbid health conditions are assessed and their association to weight and obesity are evaluated. The second and third section of the survey responses and findings reflect the study participant’s perceptions and feelings about self esteem, self confidence, body image and peer relations. The lifestyle behaviors related to nutrition and physical activity among the adolescents are assessed. The findings in the survey sections related to self esteem, body image, nutrition and physical activity present both individualized and comparison tables for the girls collectively who were healthy, normal weight and those who were overweight and obese

Survey Results

Demographics

The participants for this study included 50 Latina girls ages 10-15 years who were attending fifth through ninth grades. The demographic profiles which included country of birth, language spoken in the home, age and grade of the girls participating in the study are shown in Table 1. There were 84% of the Latina adolescents participating in this study who were born in the United States and 56% of the girls...
lived in households where Spanish was the primary spoken language. All of the participants spoke and understood the written and oral English language in contrast to their parents who primarily spoke and understood only Spanish (see Figure 1).

*Figure 1. Study Participants’ Place of Birth and Language Spoken at Home.*
It was important for the purposes of the research to learn about the participant’s parent’s birthplace and educational attainment. The majority of participants, 72%, stated that their mother was born in Mexico, and 80% stated their father was born in Mexico (see Figure 2).

![Bar chart showing the place of birth for mothers and fathers.](image)

**Figure 2.** Study Participants’ Mother’s and Father’s Place of Birth.

In many cases, the participants did not know the educational level of their parent and looked to the parent for the response. In their responses, 34% of the participant’s mothers attained an elementary/middle school level of education with 46% of the mothers' finishing high school. The majority of fathers, 46%, obtained
elementary/middle school level of education with 34% completing high school (see Figure 3).

![Bar chart: Mother's Education]![Bar chart: Father's Education]

**Figure 3.** Study Participants’ Mother’s and Father’s Level of Education.

In correlation to educational level attainment, it was important to obtain the parent’s employment information to determine an estimated income level and access to educational and health resources. The majority of mothers, 84% were engaged as housewives caring for home and children while 16% reported other employment that included work in restaurants, stores, independent business or factories. The majority of
fathers, 74%, were employed in construction and labor with 18% of the participant’s reporting their father worked in service and business industries. It was an interesting observation to the researcher, that 18% of the participants stated, “idk, I don’t know,” which might indicate unemployment or lack of personal relationship with the father (see Figure 4).
Parents’ Roles and Decision Making in the Family

Finally within the demographic section of the research study, it was essential to understand whether “traditional, stereotypical” roles existed in the home environment through asking the questions involving money management, cooking and health care decisions. Overwhelmingly, 46% of the fathers were responsible for controlling the finances and 80% of the mothers were responsible for cooking. In some cases, the participants indicated that both parents cooked however in all surveys, except for one, the mother was checked as responsible for cooking. Conversely, since in the Latino household, the mother’s traditional role is caring for the husband and children, 86% of the mothers were responsible for making healthcare decisions (see Figure 5).
Study Participant’s Classification of Normal/ Healthy Weight, Overweight and Obese

The researcher utilized the following methods in obtaining height and weight of the participants: the hand held body mass calculator, a bathroom scale and self report by child and parent as indicated in survey questions 15 and 16. The heights were primarily obtained through self report or estimation by researcher. Many of the Latino girls heights in the survey were “much shorter” than average heights of girls the
same age which may demonstrate that genetics and heredity have some impact on the potential of becoming overweight or obese as the girls advance to puberty. Additionally, many of the parents were also much shorter in stature.

After all of the participant’s weights and heights were obtained, the researcher used a BMI wheel approved by the California Medical Association and calculated percentages of BMI and risk based on age, height and weight. There were 23 participants, who were 10-81% indicating low, healthy, normal weight. Within the 23 participants who were normal weight, there were six girls who may whose BMI was 10-30%, considered low weight and there were seven of the normal/ healthy weight girls who were at risk of becoming overweight ranging between 65% to 81% on the BMI scale. There were 16 participants measuring in the 84th to 94th percentile indicating overweight with 8 of the 16 overweight girls being at risk for obesity at or above the 90th percentile. There were an additional 11 participants measuring in the 96th to 97th percentile who would be classified as obese (see Figure 6).
Healthy vs Obese Weight Classification

- Low weight: 10-39% 8
- Healthy/Normal: 40-64% 7
- At Risk 65-81: 65-81% 8
- Overweight 82-95: 82-95% 16
- Obese 96+: 96+ % 11
- Total Participants: 50

Figure 6. Study Participants’ Classification of Healthy vs. Obese Weight Classification.

Study Participant and Parents Co-Morbid and Chronic Health Conditions

As described through the HHANES study in Chapter 2, overweight and obesity in Latina adolescents may often be correlated with genetics, healthcare access and the prevalence of chronic conditions and diseases that include diabetes, depression, parental obesity, and heart issues. When participants were asked if they had a relationship with a family doctor, 64% responded affirmatively and 34% of the participants said “no.” When participants were asked if any family members had any
of following conditions: diabetes, depression, overweight, heart issues, or other, participants looked to their accompanying parent for guidance. They either did not know or wanted their parents to answer the question.

There were 20% of the participants who reported that a family member had diabetes, 6% reported weight problems and eight percent reported heart issues in either parents or grandparents. There were 20% of the respondents who stated that their family member had diabetes and one other co-morbid condition, which included depression, heart, or overweight issues. The researcher found an interesting observation that only 6% of the participants who were accompanied by a parent, who was clearly overweight or obese reported in their presence that a family member was overweight. This can be attributed to the following reasons: denial, misunderstanding or non acknowledgement of what is a healthy weight, cultural perceptions. The participants through non admission may have been showing respect to their parent, preventing embarrassment or retaliation. These same parents were quick to identify to the researcher their concern for their children’s issues of overweight and obesity (see Figure 7).
Figure 7. Study Participants’ Parents’ Co-Morbid and Chronic Health Conditions.

Study Participant’s Reporting of Co-Morbid Health Conditions

When the adolescent survey participants were asked if they had diabetes, depression, overweight, heart issues and other health conditions, none of the participants identified diabetes, depression or heart issues. While 50% of the participants were overweight or obese, only 4% of the participants reported that they were overweight (see Figure 8). These omissions will be further examined and explained in the self esteem quantitative survey findings where 73% of the overweight/obese participants reported that they were undecided or felt that they were too fat; 86% were undecided or felt that they should go on diet and lose weight and 56% of these girls reported that they were undecided or did not like their body.
Figure 8. Study Participants’ Reporting of Co-Morbid Health Conditions.

BODY : Self Esteem, Body Image and Peer Influence Results

The next section of the survey, questions 20 to 35 addressed the study participant’s feeling regarding self esteem, self concept and body image. Since within this adolescent population of girls, self esteem and body image can be correlated with physical appearance, size and frame, the researcher asked the participants questions to ascertain their reality with their body size and it’s effect on their feelings about their self, looks, and body concept. Since many of the questions pertaining to appearance, body image and weight might seem negative to the participant, the researcher balanced the survey by implementing questions related to personality, qualities, intelligence and likeability by classmates. The questions regarding looks and body image were positioned on the survey by stating the question positively, “On the whole I am
satisfied with my body,” vs. “I think that I am too fat” to ascertain on the individual survey if the participant’s responses were the same.

In this section, the entire group of 50 adolescent Latina participant’s responses were collectively analyzed to obtain a comprehensive overview of this population’s perspectives on weight, abilities, self esteem, body concept, and their behaviors related to nutrition and physical activity. Since one of the secondary questions of this research study was, “What is the impact of weight and obesity on self esteem, body image and self confidence within this population?,” the entire group of participant’s responses were divided for comparison between those participants who were overweight/obese and those who were healthy/normal weight.

Study Participant’s Assessment of Self Confidence, Aptitude, and Personality

The study participant’s were asked questions to ascertain their levels of self satisfaction, self confidence, feelings about their personal qualities, abilities, and personalities. There were 74% of the participants who stated that they were satisfied with themselves while 26% were either undecided or not satisfied with themselves. Approximately 38% of the participants possessed self confidence, while 60% were undecided or stated that they lacked self confidence (see Figure 9).
Of the 50 participants in the study, 70% felt that they were able to do things as well as most others, and 84% felt that they had a good personality (see Figure 10).

**Figure 9.** Study Participants’ Assessment of Self Satisfaction and Self-confidence.
Figure 10. Study Participants’ Assessment of Aptitude & Personality.

When the overweight/obese participants were asked to respond to a statement about self confidence, approximately 38% responded that they were undecided, agreed or strongly agreed while 16% of the healthy normal weight participants responded that they were undecided, agreed or strongly agreed. Conversely, 24% of the healthy/normal weight girls strongly disagreed or disagreed as compared to 14% of the overweight/obese girls. Both group of girls equally stated that they felt that they possessed good qualities and were capable of doing things as well as other girls their age. It was interesting however that 28% of the overweight/obese girls stated that they
strongly agreed that they had a good personality as compared to 18% of the healthy/normal weight girls (see Figure 11).

**Figure 11.** Personality Assessment Healthy Weight and Overweight/Obese Study Participants.

**Study Participant’s Assessment of Physical Appearance, Looks and Intelligence**

Within the adolescent Latina population, feelings and perceptions about weight, physical appearance, intelligence and looks are often correlated to one’s self esteem. The participants were asked the following questions, “I feel that I am pretty or cute,” to which 44% of the participants responded affirmatively while 56% were undecided or did not feel this way. When asked the question, “I do not like the way that I look,” approximately 50% of the participants were undecided or stated that they did not like the way that they looked. In contrast when the participants were asked to provide input on their intelligence, over 74% of those surveyed felt that they were smart (see Figures 12, 13, & 14).
Figure 12. Study Participants’ Assessment of Physical Appearance

Figures 13. Study Participants’ Assessment of Looks.

Figure 14. Study Participants’ Assessment of Intelligence.
When the girls collectively were asked if they were pretty or cute, approximately 20% of the overweight/obese girls responded affirmatively and 24% of the healthy, normal weight girls agreed with the statement. It was interesting that 26% of the overweight/obese girls and 20% of the healthy/normal weight girls stated that they were undecided if they were pretty or cute. When asked to respond to the statement, “I do not like the way that I look,” approximately 20% of the overweight and obese girls stated that they agreed or strongly agreed with the statement as compared to 8% of the healthy/normal weight girls (see Figure 15).

![Figure 15. Physical Appearance Assessment Healthy Weight and Overweight/Obese Study Participants.](image)

When the girls were questioned about their intelligence, approximately 44% of the overweight/obese girls felt that they were smart as compared to 30% of the healthy/normal weight girls. There were 28% of the overweight/obese girls who strongly
agreed that they were smart as opposed to 8% of the normal/healthy weight girls (see Figure 16).

![Graph showing intelligence assessment between healthy and overweight/obese participants.]

Figure 16. Intelligence Assessment Healthy Weight and Overweight/Obese Study Participants.

Study Participant’s Perception of Body Image/Body Satisfaction and Feelings of Sadness

The participants of the research study were asked a series of questions to assess not only their feelings about their looks and self esteem but also their impressions of their body satisfaction and body esteem. Approximately 52% of the study participants stated that they were undecided or not satisfied with their body. Overwhelmingly, 60% of the participants in the study stated that they were either undecided or felt that they were too fat and 68% were undecided or felt that they should go on a diet. Finally 68% of the girls responding to the survey expressed being self conscious about their body in the locker room (see Figures 17 & 18).
When the group of girls were provided with the statements, “I think I am too fat” and “I should lose weight and go on a diet,” 36% of the overweight/obese girls agreed or strongly agreed while 10% of the healthy/normal weight girls felt this way. It was interesting, however, that 10% of the healthy/normal weight girls stated that they were undecided. Approximately 38% of the overweight/obese girls agreed or strongly agreed that they should go on a diet and lose weight as compared to 12% of the healthy/normal weight girls (see Figures 19 & 20).
Figure 19. Assessment of Weight between Healthy Weight and Overweight/Obese Participants.

Figure 20. Assessment of Dieting between Healthy Weight and Overweight/Obese Participants.
The two groups of participants were asked a question about feeling self-conscious about their bodies in the locker room to ascertain their perspectives on modesty, peer influence and body concept. Approximately 30% of the overweight/obese girls stated that they were undecided, agreed or strongly agreed with the statement as compared to 16% of the healthy normal weight girls (see Figure 21).

![Figure 21. Assessment of Modesty between Healthy Weight and Overweight/Obese Participants.](image)

Since self esteem, body image and satisfaction are often associated with depression and feelings of sadness, the participants were asked if they often felt sad or disappointed with themselves. Over 74% of the participants stated that they were undecided or often felt sad or disappointed with themselves (see Figure 22).
I often feel sad or disappointed with myself

Figure 22. Study Participants’ Feelings of Sadness or Self Disappointment.

When the two groups of girls were asked about sadness or self disappointment, approximately 34% of the overweight/obese girls stated that they agreed or strongly agreed with the statement as compared to 18% of the healthy/normal weight girls. It was interesting however, that 18% of the healthy/normal weight girls stated that they were undecided (see Figure 23).

Figure 23. Assessment of Sadness between Healthy Weight and Overweight/Obese Participants
Study Participants Perception of Peer Influence, Bullying and Likeability

The final three questions of this section assessed the participant’s feeling about male and female peer relationships, likeability and experiences with negative peer reactions related to being teased about their appearance and looks. Approximately 46% of the participants stated that they were undecided or had been teased about the way that they looked. It was interesting to note that while 70% of the respondents felt that the girls in their class liked them; 64% of the participants were undecided or felt that the boys did not like them (see Figures 24 & 25).

Figure 24. Study Participants’ Assessment of Teasing and Bullying.
The boys in my class like me

Figures 25. Study Participants’ Assessment of Likability.

When the group of girls were asked if they had been a victim of teasing due to their looks, approximately 18% of the overweight/obese girls reported affirmatively as compared to 12% of the healthy/normal weight girls. It was interesting, however, that 12% of the overweight and obese participants stated that they were undecided if they had been teased (see Figure 26).

Figure 26. Assessment of Teasing Among Healthy Weight and Overweight/Obese Participants.
The next section of the survey measured the frequency and assessed the impact that nutrition can have on the adolescent Latina’s weight, ultimately affecting self concept and body image. The participants were asked nutritional questions that included frequency of daily breakfast, school lunch, fruit and vegetable consumption, water, and milk intake. The participant’s were also questioned regarding frequency of fast food consumption and soda intake.

Since weight and obesity prevention is associated with diet and nutritional behavior, the research study participants were asked to quantify their frequency and consumption of breakfast, fresh fruit and vegetables and water and milk intake. Over 80% of the survey participants reported that they ate breakfast four to seven days per week, with many of the respondents communicating that their breakfasts consisted of cereal and pastries which are high in sugar, starch and fat. Over 72% of the participants stated that they ate an average of three to five servings of fruits and vegetables daily while only 14% reported consuming the recommended six to eight servings daily. Finally, 60% of the participants reported that they drank an average of three to eight glasses of water and milk while only 32% reported drinking eight or more servings of the beverages combined (see Figures 27 & 28).
How many cups of fruits and vegetables do you eat a day?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

0-2 3-5 6-8 8 or more No answer

Figure 27. Study Participants’ Consumption of Fruits and Vegetables.

How many glasses of water/milk do you drink each day?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

0-2 3-5 6-8 8 or more

Figures 28. Study Participants’ Consumption of Water and Milk.

It was also important within this population of adolescent Latina girls to measure their frequency and consumption of fast food, sodas and school lunch. There were 60% of the respondents who reported consuming zero to one soda per day and 34% reported consuming two to three sodas daily. Approximately 50% of the participants stated that they ate fast food at least once per week while 32% reported fast food consumption two to three times per week. It was interesting to note that 6%
of the participants reported that they ate fast food at least five times per week. Finally, approximately 88% of the participant participated in the school lunch program two to five times per week (see Figures 29, 30, & 31).

![Figure 29. Study Participants’ Consumption of Sodas.](image1)

![Figures 30. Study Participants’ Consumption of Fast Food.](image2)
When the two groups of girls were asked their frequency of consumption of fast food, approximately 12% of the overweight/obese girls consumed fast food four to seven times per week as compared to 6% of the healthy/normal weight girls. An interesting trend was observed that 22% of the healthy/normal weight girls consumed fast food two to three times per week as compared to 10% of the overweight/obese girls (see Figure 32).
How often do you eat fast food each week.

Figure 32. Consumption of Fast Food of Healthy Weight and Overweight/Obese Participants.

When questioned about the frequency of consumption of school lunch, 42% of the overweight/obese girls report eating school lunch four to five times per week as compared to 22% of the healthy/normal weight girls (see Figure 33).

Figure 33. School Lunch Consumption of Healthy Weight and Overweight/Obese Participants.
The final section of the survey measured the frequency of the individual’s levels of physical activity to assess the frequency and impact that physical activity, sports participation, and conversely excessive levels of sedentary activity can have on self concept, weight, and body image. The participants were asked questions pertaining to hours of daily physical education in school and physical activity after school. To understand the individual’s engagement in physical activity, the researcher followed up with questions pertaining to participation in team sports and types of physical activity. Approximately 68% of the respondents stated that the average amount of time spent in physical education within the school based setting was 31 to 60 minutes and 24% reported physical education time at less than 30 minutes. Conversely, approximately 72% of the participants stated that they spent 16 to 45 minutes daily with physical activities outside of school (see Figures 34 & 35).

Figure 34. Study Participants’ Frequency of Physical Education at School.
Figures 35. Study Participants’ Frequency of Recreational Activity Outside of School.

The physical activities that survey participants reported being engaged in included sports, 20%; biking, 6%; walking, 8%; dancing, 4%; and other, 4%. Approximately 58% of the respondents stated that they participated in a combination of the above. It was interesting to note that 44% of the participants were involved in team sports and 56% reported that they did not participate in team sports (see Figures 36 & 37).

Figure 36. Study Participants’ Engagement in Team Sports.
Figures 37. Study Participants’ Engagement in Physical Activities.

Upon questioning the group of girls regarding daily physical activity outside of school hours, 30% of the overweight/obese girls stated that they participated in 16 to 30 minutes per day as compared to 16% of the healthy/normal weight girls. Approximately 32% of the overweight/obese girls did not play team sports in comparison to 24% of the healthy, normal weight girls who did not play team sports (see Figure 38).

Figure 38. Frequency of Physical Activity of the Healthy Weight and Overweight/Obese Participants.
Finally to assess the individual participant’s levels of sedentary activity, the researcher asked questions pertaining to frequency of television viewing, video game play and daily hours of homework. Approximately 34% of the respondents stated that they engaged in zero to one hour of viewing, 46% reported that they spent two to three hours nightly, and 16% reported four to five hours of television viewing and video games. While homework is important for intellectual growth, hours spent with homework can also be associated with sedentary activity. Over 98% of the survey participants reported one to three hours of homework per day. When television viewing, videogames and homework hours were combined, the participants spent an average of three to seven hours nightly on these sedentary activities (see Figures 39 & 40).

![Figure 39. Study Participants’ Daily Hours of Television and Video.](image-url)
Figures 40. Study Participants’ Daily Hours of Television, Video and Homework. 

To ascertain levels of sedentary activity, the study participants were asked, how much time they spent watching television or playing videogames per day. Approximately 34% of the overweight/obese participants spent two to three hours per day on these activities as compared to 12% of the healthy/normal weight participants. In contrast, 24% of the healthy/normal weight girls spent zero to one hour per day as compared to 10% of the overweight/obese girls (see Figure 41).

Figure 41. Daily Hours of Television/Video Among Healthy Weight and Overweight/Obese Participants.
This chapter provided the survey results and responses of the 50 Latina adolescents who participated in the research study. The results were presented in graphs to demonstrate the collective responses of all 50 participants. The results also represent the individual responses of the participants, and provides a framework for comparison analysis between the two groups of girls, those who were healthy/normal weight and those who were overweight and obese. The discussion of these results are presented in Chapter 5 and are reinforced by the research of Chapter 2, to demonstrate the interesting trends that emerged from the group collectively and the influencers of that became apparent when comparing both groups of Latina girls.
Chapter 5

DISCUSSION, CONCLUSION, LIMITATIONS, AND RECOMMENDATIONS

The adolescent Latinas in the research study were between the ages of 10-15 years and born in the United States. The majority of the girls attended public schools and lived in low-income geographic areas in the Sacramento and Stanislaus Counties. In most cases, one or both of their parents, and two to three siblings accompanied the girls. The family size and parent’s employment status was a strong indicator of financial hardship and poverty.

Since most of the girls in the study would be considered lower social and economic class, the researcher was unaware of many critical life circumstances affecting the families which may have impacted the answers provided to some of the questions related to finance, employment and health. Today in many California Counties, including Sacramento and Stanislaus, certain job categories have suffered from the economic recession and many of these jobs are the source of Latino’s earnings and provision for their families. These occupations include construction, cleaning, and maintenance; production; and farming (Carmata & Jensenius, 2009). Since most of the fathers of the study participants reported seasonal employment in agriculture and construction, issues of poverty and financial hardship were apparent.
It was important to ascertain the parents’ country of origin, ethnicity, spoken language, educational level, social economic status, and role structures as the researcher believes that both culture and poverty play a significant role in weight and obesity and its effect on self esteem and body image. The majorities of the participants’ parents were born in Mexico and spoke primarily Spanish in the home. The majority of the participant’s mothers were educated at the middle/high school level while the fathers interestingly had obtained elementary/middle school education. The mother’s worked primarily in the home and in some cases in very low skill jobs. The majority of the fathers worked in seasonal construction, labor, blue collar or temporary seasonal employment. In five cases the participants stated that she did not know her fathers job status which may have indicated an absent father or just not knowing. The majority of participants lived in low income/below poverty families based on their reported status of employment. In most of the families, mother was responsible for the cooking and healthcare decisions while father managed the money which may indicate a traditional Latin family role structure.

Nearly 32% of children and adolescents in the United States are overweight or obese, at or above the 85th percentile of BMI for age. Obese and overweight children are more likely to become overweight and obese adults and are on track for poor
health throughout their adult lives (Whitaker et al., 1997). When the girls were asked if any family members had any of the chronic conditions: diabetes, depression, overweight, heart issues and other, very few of the participants responded affirmatively or knew how to answer. Some participants looked to their parents for the answers to the questions. In almost all instances, when the daughter was overweight or obese and one or both of the parent’s were clearly overweight or obese, the daughter never admitted this in the presence of her parents.

This non-admission to the issue of chronic health conditions among their parents could be due to several cultural issues which may include protection and confidentiality with the parent’s personal information, lack of knowledge about the chronic diseases or their presence in their family member. Sharing personal information about a family member to a stranger member is not culturally acceptable. There is the perception that disease is a weakness and information should be kept in the confines of the family. Since the question pertained to the parent’s health, the participant may have felt that she could reveal information, only if she had been given permission of the parent in attendance. Sharing personal information, pertaining to health within the Latino culture is usually confined to the immediate family, a physician or a priest.

Within the Latino culture, it is a belief that events in one’s life including disease and illness may result from luck, fate, or other powers beyond an individual’s control. These health beliefs are depicted with common Spanish sayings: Que será, será (What will be will be); Que sea lo que Dios quiera (It’s in God’s hands); Esta
enfermedad es una prueba de Dios (This illness is a test of God); De algo se tiene que morir uno (You have to die of something) (Lipson et al., 1996).

**Study Participant’s Reporting of Co-Morbid and Chronic Health Conditions**

Childhood weight problems can lead to complications such as elevated blood pressure, cholesterol, joint problems, type II diabetes, gall bladder disease, asthma, depression, and anxiety (U.S. Department of Health and Human Services, 2001). Obese children and teenagers are developing diseases that were formerly seen in adults. Approximately 176,500 individuals under the age of 20 years have type II diabetes and 2 million adolescents, ages 12-19, have pre-diabetes (California Department of Public Health, 2009).

The researcher found it interesting that when the girls in the study were asked the question, “Do you have any of the health issues including weight, they did not admit to being overweight/obese.” In the self esteem questions, however relating to “At times I feel fat or I should go on a diet and lose weight,” overwhelmingly they reported that they agreed with the statements. This was also apparent when asked to respond to questions related to not liking their bodies and feeling self conscious in the locker room, where their answers were affirmative.

Why then did the girls not state that they had a weight problem in the first question? Could it have been that the weight question was integrated with other health issues: diabetes, depression, heart issues and since they did not have any of those, they were not willing to acknowledge it? Is weight/overweight not considered an issue in the culture or was it that they were in the presence of their parent and siblings and they
did not want to feel embarrassed. Within the Latino culture, the perception of obese may be a person who is so fat that they are unable to function, move and could be seen as disabled as opposed to the picture of overweight and obesity as defined by the medical community of mainstream America. Could it have been that culturally, their perception of overweight/obese in their eyes is far “bigger” than the Center’s for Disease Control’s definition of overweight/obese?

The researcher was unable to find qualitative research on perceptions on the Latino culture and perception of weight, illness and chronic disease and relied on personal experience and observations in posing the above questions. In many cases, the picture of parents and adolescents involved in the study matched the depiction of genetics and heredity characteristics demonstrated in the HHANES study where in adolescence and adulthood the average height decreased to below the 25th percentile while the weight to height ratio increased. As a result, Hispanic teens and adults are generally shorter and heavier for their statures than their non-Hispanic counterpart (Powers, 1992). Most of the parents and their daughters involved in the study were short, stocky and overweight or obese. It also appeared that most of the obese/overweight girls who were ages 10 to 12 year may have gone through puberty and early menarche as by appearance their breasts were bigger. In a few instances, when the overweight/obese participant was asked questions about their weight, usually the mother with an obvious weight problem would be quick to answer “yes” for the child and implore the researcher for help and advice.
Culture can influence the perception of risk associated with obesity. Studies of Latinos have found that many mothers of obese children believe their child to be healthy and are unconcerned about their child's weight, although these same parents are likely to believe that obese children in general should be taken to a nutritionist or physician for help with weight reduction. (MacArthur, Aguiano, & Gross, 2004, pp. 387-404).

“BODY”: Self Esteem, Body Image, and Peer Influence

In most cases, during the interviews of the participants, the fathers were present. When the researcher asked the mother’s to grant permission to interview their daughter, in all instances where the father was present, the wife looked to her husband for permission. To secure the father’s permission and trust for the daughters to be engaged in the study, the researcher was required to justify, explain and give more details of the study to the father in contrast to the mother’s who immediately agreed to their daughter’s participation. In some cases, the father wanted the researcher to restate the questions.

There were many interesting observations in the communication dynamics between mothers, fathers and daughters during the survey process. When the father’s were present, the “control and machismo” issues were very apparent in the daughters’ responses to the research questions. The daughters continually looked to their father’s for “a nod, body gesture of permission” in answering many of the questions. The Anglo, Non-Hispanic perspective of “machismo” as described in Chapter 2 implies, control and dominance over women (Aramoni, 1972). The source of these attitudes
may be attributed to the Latino’s feelings of weakness, inadequacy, fear of abandonment, guilt and the psychological need to conquer these feelings through domination, control and regulation of women, wives and daughters with the goal of raising self esteem and reclaiming their power.

When there was a question that might be considered sensitive, “I think I am pretty or cute” or “I think I am too fat,” if the daughter answered maybe, the father would correct her by saying “oh you are so cute or no you are not too fat.” The fathers used only the words “cute” for their daughters, as within the culture, the fathers will always view their daughters as “little girls.” The obese preteen girls were then addressed during the survey by their fathers, with terms of endearment, “she’s a cute little fat girl.” The fathers have difficulty coming to terms with their daughter’s impending transition from little girl to young woman. They may have viewed the overweight and obesity of their daughters as form of protection or act of repression, creating a safety net toward avoiding future problems related to sexuality. Often within the Latino culture, the machismo fathers may equate being skinny and pretty with sexuality, promiscuity and risky social behaviors. “Latina girls are expected to be skinny, have long hair and wear clothes that show our femininity, yet we had to carry this off in a way that let men know we were pure or unavailable for sex” (Everett, 2000, p. 9). Within the Latino culture, the female daughter is expected to live with her parents and remain pure until they leave their home for marriage.
Study Participant’s Assessment of Self Confidence, Aptitude and Personality

It was interesting that most of the overweight/obese girl participants responded that they agreed or strongly agreed that they were smart and had good personalities. There was very little middle ground on this question. This positive response suggests that if they might lack self confidence and feel that they are lacking in terms of looks, appearance and body image, they may be overcompensating in terms of their feelings of intelligence and personalities.

Additionally, because they socially, may be “unpopular and not in the in crowd”, they may feel alienated and spend more time and effort on their academic studies. Within the Latino culture, there is greater value placed on developing one’s inner being, mind and soul. The inner beauty is often more significant and given more importance than outer beauty.

The Dove Report: Challenging Beauty, one of the most in-depth global studies on attitudes about beauty, reveals that Latinas like what they see in the mirror and that they derive their self-esteem from non-physical traits (Gutierrez, 2004). Latinas are defining beauty beyond physical traits. Seventy-five percent of Latina women, believe that beauty comes from the spirit and a love of life, not from someone’s looks. “Beauty is what you radiate from the inside and how you touch other people. It’s what you give to others and to yourself” (Payan, as cited in Gutierrez, 2004).

Study Participant’s Assessment of Physical Appearance, Looks and Intelligence

When the participants were asked if they felt “pretty or cute”, many of them were undecided which indicated their feelings of “maybe” to the question. Often
however when observing the facial expressions and body language of these participants, “maybe” could translate into a “no”. The terms of pretty and cute may suggest different perceptions, as these pre-teen girls are transitioning from girls to young women. They may have been challenged as to how best respond to this question. As young girls, and in their father’s eyes, they may think of themselves as “cute” however growing into young women they may be considered “pretty.” The discrimination between cute and pretty infers a transition from immature to mature/ little girl to big girl and feminine to sexy which may be difficult for them to express or to understand.

During this period of the pre puberty years and adolescence, it may be difficult for many young girls when it comes to honestly admitting their feeling about their looks or appearance for fear of appearing vain, embarrassed or inferior in the eyes of their peers. With the overweight/obese girl participants, this question may have been more difficult to answer as their feelings about themselves may be directly correlated to how they compare themselves to their more attractive, thinner and popular peers. They may also compare themselves to the “Perfect Girl” or dominant Latina media role models.

Study Participant’s Perception of Body Image/Body Satisfaction and Feelings of Sadness

When the groups of girls were asked if they at times felt sad or disappointed with themselves. Approximately 74% of the girls stated that they were undecided or often felt sad or disappointed with themselves. When the groups of girls were asked
about sadness or self disappointment, approximately 34% of the overweight/obese girls stated that they agreed or strongly agreed with the statement as compared to 18% of the healthy/normal weight girls. This question was asked to determine if sadness and depression was associated with overweight and obesity. It is believed that these girls were responding with honesty to the question as it was stated “I often feel sad and disappointed. The answers to this question may not indicate clinical depression but may suggest signs of sadness and symptoms of low self esteem when comparing themselves to other girls their age.

In the Latino culture, depression is not seen as common and can be viewed as a taboo subject. “Some attribute physical illness to "los nervios", believing illness results from having experienced a strong emotional state. Thus, they try to prevent illness by avoiding intense rage, sadness, and other emotions. Depression is not talked about openly; a person may say, "I am sad" (Lipson et al., 1996). The general feeling among Latinos is that “children should never be sad or depressed.” The way of life among Latinos is often one of optimism and work to make life better. Even in the poorest of neighborhoods in Mexico, one observes children happy, smiling, playing, enjoying life without a care in the world.

Study Participants Perceptions of Peer Influence, Bullying and Likeability

It was also important within this pre-puberty Latina population, to examine the effect that popularity and “fitting in” has on the adolescent’s feelings of self worth, self confidence and body image. The physical qualities of beauty, ideal body size and attention from boys equate to “being popular and belonging to the in crowd.” Peer
acceptance is very important in the minds of girls this age. When girls this age are overweight or obese, they may have compared themselves to others and experienced feeling of decreased self esteem, shame and low morale. During the middle school years, there is much pressure “to fit in and belong” and if you look different, you may be socially isolated and suffer from group alienation.

When the group of girls were asked if they had been a victim of teasing due to their looks, approximately 18% of the overweight/obese girls reported affirmatively as compared to 12% of the healthy/normal weight girls. It was interesting however that 12% of the overweight/obese stated that they were undecided if they had been teased. Research shows that overweight young people who are targets of weight teasing are more likely to engage in unhealthy weight control and binge eating, and they are less likely to participate in physical activity (Rudd Center for Food Policy and Obesity, 2008).

Teasing and bullying can result in the overweight/obese girls’ feelings of low self esteem, lack of self confidence and inadequacy. It is important to acknowledge that during these challenging adolescent years in the school setting there are “mean girls” and “cruel boys’ who can intimidate, tease and degrade overweight and obese girls promoting fears of socialization resulting in isolation. Both boys and girls who are overweight or obese are more likely to be bullied at primary school because they do not fit into the normal physical stereotypes.
“BODY”: Nutrition, Physical Activity, and Electronic Media Influence

The findings in this research study suggests that low income and disparities in access to food, recreational activities, school resources and programs may be directly correlated to many barriers that affect healthy nutritional choices and physical activity opportunities for the low income Latina adolescents who participated in the study.

*Study Participants Consumption of Fruits and Vegetables, Water and Milk*

These barriers included that many of these low income teen participants lived in neighborhoods considered nutritional deserts where there is lack of access to fresh fruits and vegetables and increased access to fast food outlets promoting increased consumption of fast food, sodas and high fat foods. Over 72% of the participants stated that they ate an average of three to five servings of fruits and vegetables daily while only 14% reported consuming the recommended six to eight servings daily.

Within the study sample, situated in the rich agricultural area of Sacramento and Stanislaus County, the average daily amounts of fruits and vegetables consumed by the study participants were between three for five servings in contrast to the national dietary guidelines. This low intake of fruits and vegetables was not surprising due to the fact that many of these families probably live in neighborhoods where access is non-existent and costs are high.

As reported in Chapter 2, adolescent teen girls are not eating the FDA recommended portions of grains and the seven to nine required servings of fresh fruits and vegetables daily. Instead, these study participants are substituting them for
convenient, non-nutritious high fat, high sugar foods, thus raising their risk for overweight and obesity (UCLA Center for Health Policy Research, 2008).

**Study Participants Consumption of Fast Food, Sodas and School Lunch**

There were 60% of the survey participants who reported drinking 0-1 soda per day and 34% reported drinking sodas 2-3 times per day. It was apparent to the researcher that soda and other beverages were replacing milk and water as 60% of these participants reported consuming approximately 3-8 glasses of milk and water daily. Approximately 50% of the participants stated that they ate fast food at least once per week while 32% reported fast food consumption two to three times per week. It was interesting to note that 6% of the participants reported that they ate fast food at least five times per week, and approximately 12% of the overweight/obese girls consumed fast food four to seven times per week as compared to 6% of the healthy/normal weight girls.

During these challenging economic times, the Latina participants in the study and their parents may be making choices based on money and survival, “the dollar meal” over their health. “Children in the United States are at risk for “recession obesity”, as parents substitute fast food for healthy meals to try to weather the economic slump” (Land, 2009). Parents and children are choosing fast food outlets that offer higher fat meals, larger portion sizes, increased calories and more sugar through sweetened beverages, sodas and desserts over the healthier options of fresh proteins, grains, fruits and vegetables.
Additionally, these low income communities where most of the participants and their families resided are targeted by massive marketing campaigns advertising fast food, soda, energy drinks that can be linked to poor diet and high risk for excess weight gain, promoting overweight and obesity. Most recently, in these challenging economic times, these low income communities have been deluged with mass marketing campaigns aimed at the cheap dollar meal which is often high fat and unhealthy promoting obesity among this high risk population of Latina adolescents.

An interesting trend emerged when the survey participants were asked about their involvement with the school lunch program. Overwhelmingly, 42% of the overweight/obese girls stated that ate school lunch each day while 22% of the healthy/normal weight girls stated that they participated in the school lunch program. Since almost all of the adolescents in the research study were primarily low income/poverty level, they most likely participated in the subsidized school lunch program. This daily school lunch consumption caused the researcher to ponder what is contained in the public school lunch and could this be a significant factor related to obesity in this population?

While standards do exist for the school lunch program, many of the industrial school based options provided as the daily meal for these adolescents may be frozen, highly processed, canned and represent fast foods, pizza, burritos, corndogs, chow mein etc. The options of milk, chocolate milk and juice are often choices of the lunch meal while bottled water is usually not a choice. While there may at times be the options of fresh fruits and vegetables, these adolescents are migrating toward the
unhealthy choices possibly due to habit, peer influence and acquired taste. Upon researching the school lunch program, it was discovered that in the region’s public middle schools, a variety of food and beverage options are available throughout the day that include sodas, fruit drinks, high calorie dense foods and fast foods served through cafeterias, school stores and snack machines. The question became clear for the low income Latina adolescents participating in the study “was one of the major factors for obesity, the school lunch or the school environment?”

Study Participants Frequency of Physical Education at School

When examining the results of the physical education survey, it became apparent that both the overweight/obese and healthy/normal weight group of adolescent girls were not reporting adequate amounts of time spent in physical education. Physical education is the foundation for providing the tools, knowledge and confidence to lead a physically active, healthy life. Approximately 32% of the obese overweight girls and 22% of the healthy/normal weight girls reported between 16 to 45 minutes of physical activity per day.

Approximately 68% of the respondents stated that the average amount of time spent in physical education within the school based setting was 31 to 60 minutes and 24% reported physical education time at less than 30 minutes.

The National Association for Sports and Physical Education recommends 225 minutes of physical education per week for middle and high school students, which equates to approximately 45 minutes per day. The California Department of Education however requires 200 minutes of physical education per 10 days in grades 5 and 6 and
400 minutes of physical education per 10 days in the seventh through the 12th grades (California Endowment, 2007).

Since physical education at school may be the only opportunity for daily physical activity among these low income Latina participants who reside in disadvantaged communities, it is critical to examine and monitor the quality, curriculum, facilities and frequency of physical education in the schools. Studies in California have demonstrated that high quality physical education programs can have dramatic effects on improving academic achievement by enhancing concentration, decreasing discipline problems and improving academic performance.

**Study Participants Levels of Recreational Activity Outside of School**

The 2005 Dietary guidelines for Americans recommend that adolescents get at least 60 minutes of moderate to vigorous after school hours physical activity on five or more days per week, however California teens engage in only 60 minutes of physical activity on only 3.7 days each week on average; and very low levels of physical activity are more common among low income teens (California Endowment, 2007). Within this study, 30% of the low income overweight/obese girls reported that they engaged in approximately 16 to 30 minutes of physical activity per day which would equal the very low frequency stated above and does not meet the recommended guidelines. The Latina adolescent participants who lived and grew up in homes below the federal poverty level may spend more time in sedentary activities as compared to healthy physical activity during the after school hours.
Study Participant’s Engagement in Team Sports

The findings of this study demonstrated that the overweight/obese girls were less likely to participate in organized team sports as compared the healthy/normal weight girls. Approximately 32% of the overweight/obese girls did not play team sports in comparison to 24% of the healthy normal weight girls who did not play team sports. The overweight and obese adolescent participants may have lacked confidence or suffered from poor body image. They might be more likely to engage in solitary, sedentary activities rather face the fear of engaging in organized team sports where they may face competition, teasing, bullying or suffer from feelings of inadequacy. While their physical weight and health conditions may be a significant barrier, the researcher believes an additional barrier is cost, access and availability in low income schools and neighborhoods.

Study Participants Daily Hours of Television, Video and Homework

Within this research study, the low income Latina participants spent 2-3 hours per day viewing television and using electronic media. It was not surprising that the overweight/obese girls spent more time with these activities than the healthy/normal weight girls. The average of amount of time spent by the study participants with television, homework and electronic media combined ranged from four to seven hours daily which permitted limited time for physical activity during evening and after school hours.

California adolescents spend an average of two hours and twenty minutes per day watching television and playing videogames (UCLA Institute for Health Policy
Studies, 2008). Teens and adolescents who live and grow up in homes below the federal poverty level may spend more time engaged in these sedentary activities as compared to healthy physical activity during the after school hours.

The American Academy of Pediatricians estimates that the average child in the United States watches three to four hours of television daily and that these children have a significantly greater BMI than children who watch two hours or less (Robert Wood Johnson Foundation, 2008).

Since the majority of the Latina adolescent participants were from low income families, where the father worked and mother stayed at home, caring for siblings, there may be limited time and supervision for these adolescent girls to be physically active during after school hours. Additionally, in the Latino culture, the middle and eldest daughters, which most of these girls were, are usually responsible for sharing in the cooking, household chores and helping mother to care for their younger brothers and sisters. Since most of the native born Latino mothers and father’s of the participant’s spoke only Spanish and were not highly educated, the older girls may also be responsible for assisting their siblings with their homework. This increased amount of time spent with homework, household responsibilities, sibling care in combination with television viewing and electronic media, may be a contributing factor to overweight and obesity resulting in decreased body image among the overweight and obese girls in the study.

Many of these low income obese and overweight adolescents may engage in higher levels of sedentary activities which include television, videogames etc, because
they lived in communities that were not be designed for physical activity. These neighborhoods may have had limited access to parks, recreational areas, safety. Other barriers may have included lack of access to transportation, expense, time and parent engagement. In their neighborhoods, the low income Latina adolescents may not have access to affordable indoor physical activity options during the hot summer or cold winter seasons.

In conclusion, the questions posed in the study examined the many factors that are associated with and directly impact weight and obesity within the adolescent Latina populations. The influences of demographics, culture, education, socioeconomics, heredity, and related co-morbid diseases was evaluated within the parents and individual members of the research study sample population. The survey measured attitudes related to food choice, media and physical inactivity and their contribution to the perpetuation of this critical health problem. Finally it addressed the impact that overweight and obesity has on self esteem, confidence and body image among the Latina adolescents who participated in the study. The major trends that emerged from the extensive research described in Chapter two and the survey results indicated that culture, socioeconomics, poverty, food choice and physical inactivity were the major influencers promoting overweight and obesity within this vulnerable group of adolescent Latina participants.

Conclusion

Though this ethnographic research study, the researcher’s goal was to understand the underlying causes and reasons for the increased prevalence of obesity
within the Latina adolescent population and it’s effect on self esteem and body image within this population. This study examined cultural and socioeconomic factors which may influence weight and obesity within the Latina population: demographics, gender, culture, heredity and chronic disease, education, socio economics, community poverty, family, schools, nutritional choices, and levels of physical activity. The study examined the psychological and sociological factors of “the perfect girl syndrome”, cultural stereotypes, media and peer pressure that impacts self esteem, confidence and body image within this population of adolescent Latinas.

A quantitative survey was designed and administered to 50 bicultural Latina girls that measured attitudes and behavior related to, culture, customs, norms, values, self-esteem, body image, food, physical activity The survey assessed the association and influence of culture, education, poverty, heredity and co-morbid health conditions to overweight and obesity within the Latina adolescent population. The survey was designed with the intention of testing the hypothesis that the influences of culture, community poverty, parents and unhealthy lifestyles impact this critical health issue. The survey was also designed to determine the influence that weight, media, and peer pressure has on self esteem, and body image.

The key findings obtained through the surveys were reinforced by extensive research, revealed that culture, community poverty, poor nutrition and physical inactivity of both the study participants and their parent’s were major influencers of unhealthy lifestyles, overweight and obesity in this population of Latina adolescents.
The majority of the bilingual, acculturated adolescent Latinas in the research study were from low income/poor families. The majority of the parents were born in Mexico and possessed less than high school education. The gender role structures within the household were traditional. The study participant’s cultural perceptions and ideas about health, disease and obesity differed from the perceptions of traditional medicine and mainstream America. The norm related to “open communication and sharing personal information” differed as the Latino cultural view is that sharing personal or medical information about the individual or family is culturally unacceptable and should remain in the confines of family or with a priest or medical provider. Through observation and the survey process, it became apparent that the girls were influenced by cultural perceptions modeling their parents’ nutritional behaviors and unhealthy lifestyles. Through the survey process, it became obvious to the researcher that parents may have limited knowledge of health and lacked skills for conveying information about weight management and disease prevention to their adolescent daughters.

Community poverty was a major influencer promoting overweight, unhealthy lifestyles, poor nutrition and physical inactivity within this vulnerable Latina population. The researcher was familiar with the geographic locations and facilities of most of the neighborhoods and schools identified by the study participants. Most of these communities and the schools attended were located in low income neighborhoods. These communities were sites of nutritional deserts where there was limited access to healthy, nutritional food, fresh fruits and vegetables and an
abundance of fast food and convenience store establishments. These low income neighborhoods are often targets of massive advertising campaigns that promote cheap, non nutritional, high fat, large portions, fast foods and snack products.

Due to lack of community infrastructure, these low income communities were not designed with adequate parks, recreational facilities, sidewalks and safe indoor-outdoor recreational spaces. The schools which the participants attended, provided subsidized breakfasts and lunches with limited nutritional value or substance. The schools also lacked adequate physical education classes and activities necessary for this vulnerable population.

The findings from the survey demonstrated that the adolescent Latinas were not consuming adequate amounts of fruits, vegetables, milk, water. The surveys demonstrated that their frequency and consumption of sodas and fast foods was excessive. The study participants were not engaging in sufficient amounts of physical activity within school and after school hours. They were engaging in excessive amounts of time spent in sedentary activities: electronic media, television and homework.

The combined influences of cultural issues, lack of knowledge, community poverty, poor nutrition and physical inactivity behavior of the study participants and their parent’s were the main reasons for overweight and obesity affecting the self esteem, confidence level and body image of these vulnerable adolescent Latinas. The major influencers to poor self esteem, confidence levels and body image were related to culture, media and the perfect girl syndrome, society and peers.
The adolescent Latina’s in the study were conflicted between their culture’s and parent’s view of “what is beauty?” and “What is a healthy body size?” and that of the traditional medicine’s, media’s and society’s portrayal of the “ideal look, size and weight”. The Latina’s and their parents were similar in height and weight, appearing shorter and stockier. This reinforced research of the association between heredity and overweight and obesity within the Latina population.

The gender and cultural roles were apparent as observed through participant and parent’s body language and their responses to the survey. The Latino fathers exhibited “machismo” characteristics by answering for their daughters and protecting them from responding to sensitive questions. Some fathers referred to their daughters as “cute as opposed to pretty” or “little fat girl”. This appeared to be a means of protection and conveyed the father’s difficulty or fear of accepting his daughters transition into adolescence. Through these responses, the fathers may have been creating a safety net toward accepting or viewing their daughters as young women and sexual beings.

There were two set of adolescent Latinas participating in the study: healthy, normal weight girls and those who were overweight or obese. All of the girls participating in this research study had difficulty with the questions related to physical appearance and body image. The transition into adolescence from child to young girl, and peer influence was a significant factor to the girls’s negative or impartial responses related to looks and beauty. To admit they were pretty or cute may seem vain in the eyes of their peers. Most of the girls also agreed that they were too fat and
should go on a diet which reflects the impact that media, peer influence and “the perfect girl syndrome” may have on this group of vulnerable adolescents. The responses from the overweight and obese girls were much stronger reflecting their negative self perception and feelings of inadequacy regarding looks and body image.

The culture, community, family relationships and parent’s influence is a strong determinant of moral and personality development for adolescent Latinas. Thus all of the Latina girls in the study demonstrated high confidence levels related to personality. It was interesting that the overweight and obese girls expressed stronger confidence levels in questions related to intelligence. The overweight and obese girls were more likely to engage in sedentary activities, i.e. time in library, homework which may result in higher grades and self confidence related to academic achievement. It appeared that these girls may engage in more sedentary activities as opposed to participate in team sports where the may face competition, teasing or suffer from feelings of inadequacy due to their weight or body size.

Finally, it was apparent that peer influence plays a major role in the self esteem of these adolescents. The girls in the study’s survey responses demonstrated that peer influence and likability can affect their self esteem and confidence. Girls at this age are impressionable and may form their self concept based on other’s reactions and perceptions of them. The overweight and obese girls in the study overwhelmingly stated that they had been victims to bullying and teasing due to the way that they looked. All of the girls stated that they were liked by girls but most were undecided or did not feel liked by boys. In conclusion, this research study’s findings demonstrate
that there are a multitude of cultural, psychological and sociological influences that cause overweight and obesity within the Latina adolescent population today.

Limitations

The research study “BODY”: Beyond Obesity, Direction Youth, Latinas 10-15 was designed by an educated, health professional utilizing a medical model perspective. The participants and their parent’s however were much less knowledgeable and educated about disease, prevention and the issue of overweight and obesity and its many affects on their children’s self esteem. Since the questions were given to the participants by an authority figure- an adult, a stranger, the participant’s responses in some cases may have mirrored that which was expected. They may not have been entirely honest due to embarrassment or lack of knowledge about the questions. Though the researcher possessed cultural and linguistic competence to secure the trust of the participants and their parents to become engaged in the study, the researcher sensed underlying tones of “stranger anxiety” from the parents during the survey process.

Another limitation could be that if the survey questions had been delivered by a youth who was a bit older and considered more their peers or similar to an older sibling, the participant’s responses may have demonstrated stronger feelings, more honesty, openness, and trust. It would be much more comfortable for the participant to share or confide personal information or feelings to someone of the same ethnicity, who they could identify with, relate to and with whom sharing personal experiences was safe as opposed to a stranger or adult. Additionally, since the parents were present
and listening to the responses, this may have hindered the openness and receptivity of the participants to the survey process. A limitation that did occur with the parent involvement was that parents, especially fathers demonstrated “stranger anxiety,” though informed from the start, they appeared to be very concerned about the underlying reasons for the study, its result and the protection of their daughters and families personal information relating to health, finances, employment and residency status.

Another limitation for this research study was that the sample of participants and their parents lacked knowledge about the critical impact and consequences that weight and obesity can have on health, well-being and overall self esteem. In the questions related to their parents having chronic health conditions, in most cases neither the child nor the parent could admit this either due to privacy, personal issues or simply the fact that they did not know if these conditions existed.

“The use of the BMI measurement while appropriate for clinician and health professionals in estimating body fat can sometimes be inaccurate as BMI does not distinguish between fat and muscle and individuals with a significant amount of lean muscle will have higher BMIs which do not indicate an unhealthy level of fat” (Robert Wood Johnson Foundation, 2008, p.13). To recruit 27 study participants who were overweight/obese and 23 healthy/normal weight girls, the researcher may have used biased recruitment through observation and sight to control sample look and size.

Another limitation was that the data regarding weight and height was collected using three methods: calculator, scale and self report. Since the same measurement
was not used for all 50 girls, due to location, receptivity and ease, the measurements for the methods involving bathroom scale and self report should not really be compared to the measurements using the BMI calculator. Finally, the methods of measurements were not recorded on the surveys only the results.

The Likert scale was very difficult for the participant and their parents to understand. The researcher, in most cases had to translate the strongly agree into “yes, yes, yes! agree into “yes” and the strongly disagree into “no, no, no!””, while the undecided was “maybe” or “I don’t know.” It was also difficult for the participant to understand the question if it was framed in the negative “I don’t like the way I look” and the responses required using the agree/disagree response.

Within the study, it would have been more effective to ask more “yes” and “no” questions with definitive answers and to eliminate the “undecided” as an option in the survey process. The undecided response usually was interpreted as a “yes” coinciding with the participant’s hesitation to admit their honest response to the questions. Additionally, with the “undecided” and many of the “disagrees or agrees” that connoted negative qualities, the participant’s body language was incongruent to the response provided.

The age of the study participants was a limitation in relation to the questions asked regarding disease states and self confidence. Many of the words and concepts used in the survey were difficult for the participant to comprehend and understand. “At times, I lack self confidence”, could have been translated in open ended questions “Sometimes, I feel bad about myself.” The use of open-ended questions and “yes”,
“no” answers would have been more effective for this age group. Prior to commencing the survey, the language, concepts and words should have gone through a linguistic assessment to ascertain if they were fifth grade level and below.

The questions pertaining to frequencies and consumptions of fruits, vegetables, fast food, physical activity etc, may have been difficult for this age group to comprehend. They presumed that the participants understood frequency and measurements. Consequently, their answers may have been educated guesses or estimates. With these questions, the researcher was required to “probe or explain” which may have elicited responses that were expected or not exactly true.

Finally food within many third world cultures is just cooked and consumed, there is little importance placed on quantity, measurement, ingredients in its preparation. The girls learn and model their mother’s cooking without recipes and without regard of amounts of ingredients. In questions where frequency in the amount of time, cups of vegetable, sodas and fast food consumption, it would be difficult to assess if the real answer was given as the girls responded with estimates.

The most significant limitation of the study and cause for future recommendations was that this population of Latina adolescents was an understudied population. Throughout the study, the researcher found limited research on Latinas, related to demographics, cultural perceptions, parental influence, lifestyle factors and self esteem issues. This was a major limitation as the findings demonstrated certain trends however the researcher was unable to find research to back those trends up. The researcher, based on her professional experience and knowledge of the Latino culture,
health beliefs, disparities and self esteem issues was able to back up her findings through personal experience but was unable to find peer reviewed articles and research to back up many of her findings.

Recommendations

There is no one solution or one recommendation to address this complex problem of overweight and obesity affecting our adolescent Latina population today. Since the foundation of the issue involves many variables the recommendation and solutions to this critical issue are multifaceted and endless. The first recommendation for addressing this issue affecting this vulnerable, understudied ethnic and age specific population is that more research needs to be done. Throughout the study, the researcher found limited research on the Latina adolescent population. There was little research on perceptions of weight, views of health and self esteem issues in the Latino culture. There was limited research on the gender roles and parental influence on behavior and self esteem. Most of the demographic research encompassed “Latinos males and female collectively” and not solely Latinas. There was limited information on the nutrition and physical activity behaviors specific to Latinas.

As a health professional dedicated to community empowerment, health promotion and disease prevention, the implementation of health education programs and targeted community outreach initiatives are essential to reducing obesity/overweight prevalence and the related chronic health conditions affecting Latina adolescents. The role of health education programs is to develop age-appropriate, culturally sensitive health promotion and education programs that provide
children, parents and teachers with basic education on simple food choices. These nutritional programs enable the modeling of healthy food behaviors in the home and at school. Physical fitness and activity instruction for adolescents is essential to addressing the increases in sedentary activity among Latina adolescents today. Health education programs can be designed to empower adolescent Latina’s self esteem, confidence and body image. In developing these programs, it is important to recognize the roles and relationship of socioeconomics, environment, schools, family structure, peer pressure and the media in impacting adolescent’s minds while affecting their future health and bodies. Understanding these factors and the importance of prevention and education can make a difference in the lives of these adolescents while changing their perception of weight and it’s negative effects of self esteem and body image.

There are many solutions needed to address the epidemic of obesity and its effect on self esteem among Latina adolescents. The solutions must be innovative and comprehensive encompassing the many predictable indicators for adolescent obesity. These indicators include socio-economic trends, geography, education, culture, medicine, media, recreation, employment, health and welfare. The solutions must incorporate healthcare, community, environmental and school based strategies aimed at educators, government officials, policy makers, public health representatives, parents, children and youth. These recommendations reinforce much of the research described in the body of this thesis and specifically address many of the cultural, socioeconomic and lifestyle factors that are the foundation of this critical public health
issue. The development and implementation of public health programs and innovative community based solutions in these areas will promote measurable results to address this critical health problem. Finally, it takes a village to create change and make a difference toward developing community solutions and programs that will promote individual success and community empowerment within our Latina adolescent population. Since this rapidly growing population of adolescent Latinas today, will be the future mothers, sisters, aunts, grandmothers and teachers within their culture and our community, it is imperative that they convey, inspire and instill the value of healthy behaviors and lifestyles to protect the future generations of tomorrow!
APPENDIX A

Survey
Dear Participant,
Thank you for choosing to take part in this research study. All information provided on this survey will be kept strictly confidential. Please fill in or circle the appropriate responses.

1. Name of School:______________________
2. Neighborhood:_________________________
3. Where were you born? U.S. Mexico Central America Other
4. What grade are you in? 5th 6th 7th 8th
5. What language do you speak at home? English Spanish
6. Where was your mother born? U.S. Mexico Central America Other
7. What is your mother’s education? Elementary Middle High School College Graduate
8. What is your mother’s work?________________________________________________
9. Where was your father born? U.S. Mexico Central America Other
10. What is your father’s education? Elementary Middle High School College Graduate
11. What is your father’s work?________________________________________________
12. Who in your house manages money? Mom Dad Grandparent Brother/Sister
13. Who in your house does the cooking? Mom Dad Grandparent Brother/Sister
14. Who in your house makes health decisions? Mom Dad Grandparent Guardian

Please answer the following health questions:
15. What is your height?_______________________________________________
16. What is your weight?_______________________________________________
17. Do you have a family doctor? Yes No
18. Do any of your family members have? diabetes depression overweight heart issues
19. Do you have? diabetes depression overweight heart issues
The questions in this scale ask you about your self concept, body image and the influence that your friends have on your self concept and body image. Please answer each question as truthfully as possible and to the best of your abilities. For each question choose from the following alternatives:

1 = Strongly Disagree  2 = Disagree  3 = Undecided  4 = Agree  5 = Strongly Agree

20. On the whole, I am satisfied with myself.  
1 2 3 4 5

21. At times, I lack self confidence.  
1 2 3 4 5

22. I feel that I have a number of good qualities.  
1 2 3 4 5

23. I am able to do things as well as most others.  
1 2 3 4 5

24. I have a good personality.  
1 2 3 4 5

25. I feel that I am pretty or cute.  
1 2 3 4 5

26. I feel that I am smart.  
1 2 3 4 5

27. I do not like the way that I look.  
1 2 3 4 5

28. On the whole, I am satisfied with my body.  
1 2 3 4 5

29. I think that I am too fat.  
1 2 3 4 5

30. I should lose weight and go on a diet.  
1 2 3 4 5

31. I am self conscious about my body in the locker room.  
1 2 3 4 5

32. I often feel sad or disappointed with myself.  
1 2 3 4 5

33. I like to participate in sports.  
1 2 3 4 5

36. I have been teased because of the way I look.  
1 2 3 4 5

34. The girls in my class like me.  
1 2 3 4 5

35. The boys in the class like me.  
1 2 3 4 5
Please answer the following nutrition / physical activity questions:

36. How many days a week do you eat breakfast?
   0-1       2-3       4-5       6-7

37. How many cups of fruit and vegetables do you eat a day?
   0-2       3-5       6-8       8 or more

38. How many glasses of water/milk do you drink each day?
   0-2       3-5       6-7       8-10

39. How many glasses of soda do you drink each day?
   0-1       2-3       4-5       6-7

40. How often do you eat fast food each week?
   0-1 times  2-3 times  4-5 times  6-7 times

41. How often do you eat school lunch?
   0-1 times  2-3 times  4-5 times

42. How many minutes of physical education at school, do you engage in each day?
   0-15 minutes  16-30 minutes  31-45 minutes  46-60 minutes

43. How many minutes of physical activity (not including physical education) do you do each day?
   0-15 minutes  16-30 minutes  31-45 minutes  46-60 minutes

44. What do you do for physical activity? (Circle all that apply)
   sports      biking      walking      dancing      running      other

45. If you engage in sports- do you play team sports?   Yes       No

46. How many hours a day do you spend watching T.V. or playing video games?
   0-1 hour    2-3 hours    4-5 hours    6-7 hours

47. How many hours per day do you spend on homework?
   0-1 hour    2-3 hours    3-4 hours    4-5 hours
APPENDIX B

Consent to Participate Form
Consent to Participate

My name is Martha Geraty and I am a graduate student in the Masters of Arts in Education and Behavioral Sciences (Gender Equity) program at California State University, Sacramento. You are being asked to participate in a study that examines weight and obesity in the adolescent Latina population and its effect on self-esteem and body image. Your participation involves orally responding to 47 questions that measure demographics, health indicators, weight and height, self-concept, peer relations, nutritional choice and physical activity levels. The survey will take 15-20 minutes of time.

This survey is completely anonymous and no name or identifying information is required to take part in the study. Your participation is completely voluntary. You may discontinue your participation at any time, or choose to only answer questions that you are comfortable answering without penalty.

Thank you for your participation it is greatly appreciated,

______________________________    ____________________
Signature       Date
REFERENCES


