THESIS
2
2007

This is to certify that the
thesis entitled

PERCEPTIONS OF FITNESS AMONG HISPANIC FEMALE ADOLESCENTS

presented by

DANA M. MUNK

has been accepted towards fulfillment
of the requirements for the

Doctoral degree in Kinesiology

Martha E. Ewing
Major Professor's Signature

7-06-08
Date

*MSU is an Affirmative Action/Equal Opportunity Institution*

LIBRARY
Michigan State
University

**PLACE IN RETURN BOX** to remove this checkout from your record.
**TO AVOID FINES** return on or before date due.
**MAY BE RECALLED** with earlier due date if requested.

| DATE DUE | DATE DUE | DATE DUE |
|---|---|---|
| MAY 23 2008 | | |
| APR 12 2008 | | |
| SEP 24 2011 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

2/05 p:/CIRC/DateDue.indd-p.1

# PERCEPTIONS OF FITNESS AMONG HISPANIC FEMALE ADOLESCENTS

By

Dana M. Munk

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Kinesiology

2006

ABSTRACT

PERCEPTIONS OF FITNESS AMONG HISPANIC FEMALE ADOLESCENTS

By

Dana M. Munk

The purpose of this study was to use qualitative measures to explore the impact of individual, environmental, and task constraints on Hispanic female adolescents' perceptions of fitness. Using Newell's (1986) Model of Constraints as a framework, two specific research questions were addressed: (a) How do Hispanic female adolescents, who think of themselves as normal weight and overweight, define fitness, and are there differences in definitions between the sub-groups; and (b) Are there differences in individual, environmental, and task constraints among Hispanic female adolescents, who think of themselves as normal weight and overweight? Fifteen participants completed standardized open-ended interviews, which were audio-taped and transcribed. Results were analyzed by two researchers and further triangulated with a third expert.

Self-reported normal and overweight participants defined fitness in sports-related and health-related ways; however, differences did emerge between the two groups. Normal weight youth gave pre-dominantly sports-related responses, while overweight girls defined fitness in more health–related terms. These themes were further reflected in participants' perceptions of their own fitness, descriptions of fit family members, and discussions about physical activities in which they engaged.

Results also revealed differences in constraints between the two sub-groups. Individual factors which emerged indicated that normal weight girls more often perceived

themselves as more fit and motivated towards fitness than overweight youths. Environmental differences were demonstrated in several ways. Normal weight participants perceived themselves as being knowledgeable about fitness and positively influenced by family members. Physical education teachers and family members were cited as sources of encouragement by both groups, and, in addition, normal weight girls viewed peers as a source of encouragement, while overweight girls cited peers as barriers to fitness.

Finally, results revealed differences in task constraints between normal and overweight participants. Normal weight youths reported they engaged in physical activity more frequently and in a greater variety of activities than overweight girls. Normal weight participants also demonstrated a higher interest and greater participation in vigorous activities than overweight girls.

Copyright by
Dana M.Munk
2006

To My Parents:
For modeling hard work, making family a priority, and
choosing to love through many challenges.

ACKNOWLEDGEMENTS

How fortunate I was to end up in Dr. Marty Ewing's office at a time in my life when I needed guidance, not only as a student, but also in this enormous life transition. I thank her for her endless patience, direction, confidence, and respect. Her friendship, too, was always a bright spot during this challenging time in my life.

I would also like to thank my committee members Dr. Crystal Branta, Dr. Deborah Feltz, and Dr. Holly Brophy-Herb. These three unique individuals with their different perspectives not only led my thinking, but also challenged it.

There were several Spartan alumni who helped me on this journey. First and foremost, I would like to thank Dr. Peggy McCann for mentoring me as a student, writer, researcher, and for being a great friend. Her efforts were needed and are appreciated beyond words. Many thanks also to Dr. Kathy Jameison and Dr. Tiffany Tonsing for their advice during the various stages of this research.

I would also like to thank my colleagues and peers at GVSU who supported every stage of this endeavor. Many thanks go to them not only for re-arranging my teaching schedule around my student schedule, but also for being good listeners and sharing your thoughts, ideas, and experiences with me.

I must also thank my family for their support in this endeavor. My parents not only encouraged me, but often shared the stresses of transition. My thanks also to Den, Karen, Caleb, and Sam, for timely words of encouragement and a wonderful sense of humor; both are much appreciated. I would also like to thank Josh and Tracy for

keeping in touch over the miles and for keeping me young at heart. Their young energy has often reminded me not to take life too seriously! I am fortunate to have been raised with many of the privileges the participants in my research did not have.

I would also like to thank the many people who are like family to me: Claudette, Mark, the O'Leary family, Mary, Nancy, Becky, Sharon, Beth, Linda, and Nancy L. Their frequent emails and words of support gave me energy to continue, particularly in the final months of this degree. I thank them for celebrating each small step with me - they are wonderful, caring people.

Last, but certainly not least, I would like to thank Colleen. The greatest reward in completing this transition has been the freedom I've achieved to share the challenges of a life that lies ahead. LIFE IS GOOD, and for that, I give my heartfelt thanks.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

# CHAPTER ONE

## Introduction

The Centers for Disease Control (CDC) recently reported that over nine million youth, ages 9-13, are overweight, a figure that triples what was reported in 1980. In addition, another nine million youth are considered to be at risk of becoming overweight (CDC, 2004). Statistics for Hispanic children are even more alarming. From 1984 to 1994, a significant increase in the prevalence of obesity was reported for Hispanic boys and girls, ages 4-17, (Crawford, Story, Wang, Ritchie, & Sabry, 2001; Ogden, Trociano, Briefel, et al., 1997) with the rise in obesity for Hispanic females, ages 6-17, increasing most significantly. The CDC (2004) also reported that 22% of Hispanic children, ages 9-13, are more likely to be obese than Caucasian children in the same age group. These statistics suggest that the incidence of being overweight and the risk of obesity in Hispanic children, particularly females, will continue to increase, unless solutions are found.

Related research by the CDC (2004), which examined participation in physical activity during non-school and regular school hours, yielded great cause for concern for the health of youth in the United States. In 2004, only about one-half of students, ages 9-13, attended physical education classes one or more times weekly. Furthermore, less than one-third participated in daily physical education classes. It was also reported that over half of these children did not participate in any organized physical activity during non-school hours (CDC, 2004). More specifically, 33 % reported they did not participate in

moderate or vigorous physical activity. The CDC further reported that Hispanic females attended physical education classes more than Caucasian or black girls, but were significantly less likely than Caucasian children to play on a sports team (CDC, 2004). Previous studies have also indicated that U.S. Hispanics are typically less physically active overall than white counterparts (Crespo, 2000; Crespo, Smit, Carter-Pokras, & Anderson, 2001; King, Castro, Wilcox, et al., 2000; Pratt, Macera, & Blanton,1999). Jameison, Araki, Chung, et al. (2005) also found low levels of physical activity reported by Hispanic girls over a seven-day period. In addition, Garcia, Broda, Frenn, et al. (1995) reported that females needed more social support to be physically active, and involvement in vigorous activity was linked to higher levels of family income and education. These findings suggested that activity behaviors in children are multi-faceted.

Regarding the environment, research has found that access to affordable facilities, safety of neighborhoods, existence of trails, sidewalks, parks and recreation areas, and time spent watching television were all related to fitness in youth (French, Story, & Jeffrey, 2001). Other variables such as time spent outdoors (McArthur, Anquiano, & Gross, 2004; Sallis et al., 1993), activity levels of parents (DiLorenzo, Stucky-Ropp, VanderWal, & Gotham, 1998) and cultural beliefs and practices (Garcia-Coll, Meyer, & Brillon, 1995) all need to be addressed in order to better understand fitness in minority children.

Concurrent with the increase of obesity and inactivity in U.S. youth is the tremendous growth and development of organized youth sports. Today, more opportunities exist for participating in a greater variety of activities than ever before. In the current decade, it is estimated that approximately half of all youth between the ages of

6 and 18 participate in youth sports and physical activity (CDC, 2003; Smoll & Smith, 1996).

The increase in sports participation opportunities, the decrease in reported physical activity, and the increase of childhood weight problems all tell a very conflicting story. These discrepant findings raise important questions about youth participation in physical activity and sport, particularly among Hispanic females. It could, or possibly should, be concluded that increased opportunities for sports participation would lead to a decrease in overweight children; however, this does not seem to be the case. Further inquiry into children's reasons and understandings about participation in sports and physical activity could be a useful tool in understanding these contradictory findings.

A study by Ewing and Seefeldt (1992) asked youth to give reasons for why they participated in sports and physical activity. One of the top reasons given was "to be fit" or to "stay in shape." If this response were combined with the increased participation opportunity data, it could easily be assumed that youth today should indeed be more fit than ever before. However, the previous data on obesity and inactivity make it unclear what youth mean by the reasons they give, or what they truly understand about fitness or see as important about participation.

Physical fitness has been defined as a set of attributes that people have or achieve relating to their ability to perform physical activity (U.S. Department of Health & Human Services, 1996). Howley and Franks (1997) offer an alternative definition which states that fitness is a state of well-being with a low risk of premature health problems and the energy to participate in a variety of physical activities. Fitness can further be categorized in two ways: health-related fitness and skill-related fitness. Health-related fitness

consists of such components as body composition, cardiovascular fitness, flexibility, muscular endurance, and strength. Skill-related fitness, on the other hand, refers to those components which have a relationship with enhanced performance in sports and motor skills, such as speed, agility, balance, coordination, power, and reaction time.

How youth define fitness is not well documented in current literature. Given the previously mentioned definitions, this could be a key to solving the fitness problems in children. For example, a pilot study by Munk, Ewing, and McCann (2002) examining 9-11 year old Caucasian children's perceptions of fitness, suggested that participants had a fairly narrow view of what fitness was, but did link being in shape to feeling good about themselves. Participants' definitions ranged from getting healthy or eating right to being able to run fast for a long time. Gender differences also existed where, although boys and girls shared a basic awareness of fitness, there were clear differences in their explanations regarding their own fitness level.

While this study was insightful, it also demonstrated the need for further examination of other children's perceptions of fitness. The research scope expanded to include Hispanic children (and, for this study, Hispanic female adolescents), who were cited by the CDC as having significant overweight and inactivity problems, to see if differences in perceptions and understandings of fitness and physical activity might exist which could help reduce their weight and motivate them to become more physically active. By simply knowing how this population defines fitness could impact teachers, coaches, and other adults by offering more suggestions on how to educate the kids about participation in sports and physical activity as a measure for preventing and treating obesity.

A useful model for studying Hispanic girls' perceptions of fitness and physical activity is Newell's (1986) Model of Constraints (see Figure 1 below). This model provides a way of organizing information and gives a means for analyzing and thinking about participants' ideas, beliefs, and perceptions of fitness. It states that movement arises from the interactions of the organism, that it occurs within the environment, and that it indicates the task to be undertaken. If any of these three factors change, the result is a change in movement outcome (Haywood & Getchall, 2001). This model is most useful in studying motor development because an individual is always undergoing age-related changes which cause interactions between the task and environment. These factors, or constraints, serve to limit, discourage, permit, or encourage movement behaviors. These same concepts can be applied to the study of perceptions of fitness among Hispanic female adolescents.

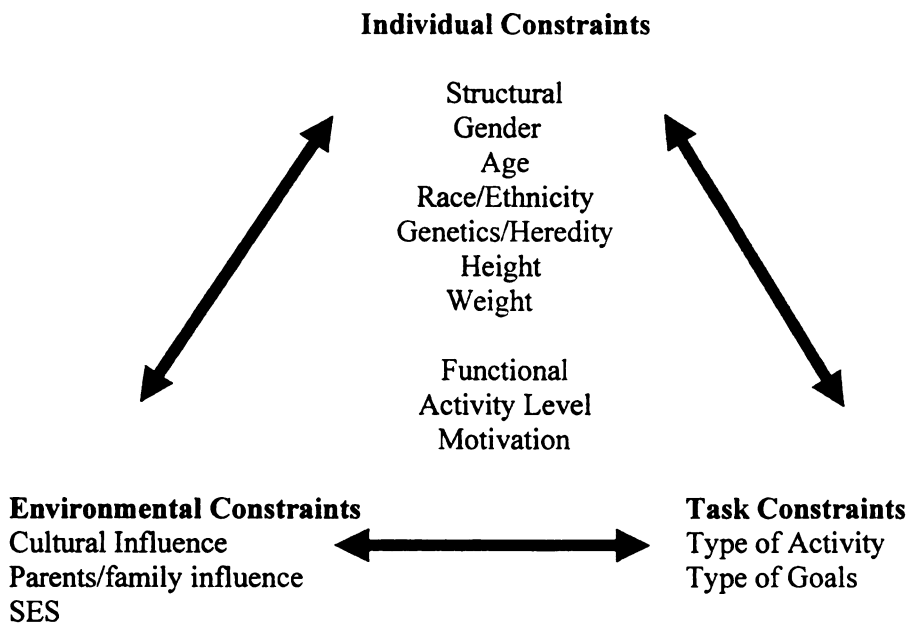


*Figure 1.* Adaptation of Newell's (1986) Model applied to Hispanic Girls' Perceptions of Fitness

Newell (1986) proposed three categories of constraints: individual, environmental, and task. Individual constraints could be structural (e.g., height, weight, gender) or functional (e.g., motivation and activity level). For example, gender may impact fitness in females in a variety of ways. Malina, Bouchard, and Bar-Or (2004) concluded that females, on average, tend to be more endomorphic than boys and are frequently earlier maturers. Early maturers typically weigh more and are slightly shorter than late maturers, when pubertal growth is complete (Brooks-Gunn, 1988). Research has also suggested that higher proportions of Hispanic females experience early menarche which is positively linked to obesity (Adair & Gordon-Larsen, 2001).

It would be interesting to learn more about how individual constraints impact Hispanic female adolescents' perceptions of fitness and physical activity. Quantitative measures have provided much statistical data about this population, but very little qualitative work has been done. Guided by Newell's (1986) model the present study explored individual factors which could potentially impact Hispanic adolescent females by assessing height, weight, and physical activity motivation level, as well as asking participants to discuss and evaluate their own current fitness levels.

The second category, environmental constraints, are defined as those constraints which exist in the world. They can be physical in nature (e.g., heat, light, surface, gravity) or sociocultural (e.g., parents, culture, SES). Newell (1986) concluded that these factors exist outside of the body and influence movement behavior in an individual. Anderson (1992) also suggested that families operate within a cultural reality that is heavily influenced by both ethnicity and social class position.

Research examining potential environmental constraints in Hispanic culture has been descriptive in nature. One environmental influence could be poverty. In 1994, there were 31 million Americans of Hispanic origin in the United States (Crawford et al., 2001). Over one-third of this population was under age 18, and one-third of these youth lived in poverty (a statistic, which reflects a rate three times that of white children). About 25 % of Hispanic families were headed by single mothers (Crawford et al., 2001).

Furthermore, Hispanic families are traditionally characterized by the ideal of familialism; that is the individual is less important than the family. Within this community the family is regarded as the primary social unit and familial self-reliance is emphasized (McDade, 1995). Solidarity and interdependence among parents and children is actively fostered (Harrison, Wilson, Pine, Chan, & Buriel, 1990; Vega, 1990). However, research has differed as to whether parents tend to be less authoritative and more protective of children. Zuniga (1992) suggested that the Hispanic attitude toward young children is to pacify them, rather than emphasizing early developmental milestones such as motor, social, reading, or speaking achievements. Garcia-Coll et al. (1995) concluded that Hispanic mothers often force care-taking responsibilities onto their older children, while Jumbanathan, Burts, and Pierce (2000) stated that Hispanic mothers may have unrealistically, high expectations of their children.

Evidence does suggest that traditional female and male roles, characterized by male supremacy and female submissiveness and strict sex and age-role delineation, have generally been relaxed and the machismo stereotype of the Hispanic male is not an accurate depiction. In addition, maternal employment has greatly increased equity in Hispanic families (Baca-Zinn, 1994; Garcia-Coll, et al. 1995). In fact, Hofferth (2003)

concluded that while Hispanic fathers control their children less in two-parent families, they show more responsibility towards child rearing than Caucasian fathers. If Hispanic parents are more relaxed with their children and place less emphasis on traditional sex roles, it might be valuable to explore if and how these practices impact their daughters' perceptions about fitness. In related research on environmental constraints, Sherman, Liao, Alexander, Kim, M., and Kim, B. (1995) studied family factors related to childhood obesity and reported that such factors as the Body Mass Index (BMI) of mothers, incomplete or alternative family structures, education level of parents, and lower socioeconomic status were all negatively linked to childhood obesity in Hispanic children.

These studies all suggested environmental influences exist but did not demonstrate how they might impact perceptions of fitness in Hispanic female adolescents. Gender boundaries have relaxed which would perhaps discount socialization as a reason for Hispanic girls' inactivity. However, this population continues to be unfit, which raises concern over the influence of family, home environment, peers, siblings, and cultural differences. Could Hispanic females be inactive and/or overweight due to cultural influences? Are their activity choices linked to cultural and family values? Poor dietary habits have been well-documented in this population; however, the influence of home culture on fitness has not been well researched.

Newell's (1986) Model provides an excellent framework in this study from which to explore this piece of the puzzle. By using the model, an analysis was performed to discover the impact of environmental factors on Hispanic female adolescents' perceptions of fitness and physical activity. Questionnaires given to participants asked them to

discuss their home life and parents, as well as their own levels of fitness in order to determine where and from whom Hispanic female adolescents learned what they knew about fitness and who they might ask if they wanted to know more.

The last category defined by Newell (1986) is that of task constraints, which are external factors impacting movement behavior. These factors might include type and goal of the task, rules of the task, and the type and availability of equipment. This area has been under-researched, particularly in the proposed Hispanic population. Research has shown gender differences in task choice in terms of type and intensity of activity (Brustad, 1996; Faucette, Sallis, McKenzie, Alcarez, Kolody, & Nugen, 1999).

More specifically, Hispanic children have been found to be less active at home and during school recess, are reported to be monitored by adults more, and have less access to active toys (McKenzie, Sallis, Nader, Broyles, & Nelson 1992). Additionally, hours spent watching television may contribute to the problem of overweight and inactivity in Hispanic females. Studies have documented that television viewing (2-3 hours a day) is negatively associated with physical activity in Hispanic children. More specifically for Hispanic females, television viewing was also associated with being overweight (Anderson, Crespo, Bartlett, Cheskin, & Pratt, 1998; Lowry, Weschler, Galuska, Fulton, & Kann, 2002). In a more recent study of Hispanic families in North Carolina, McArthur, Anquiano, and Gross (2004) reported that the main activities undertaken by families four to seven times per week were: watching television (73%), listening to music (69%), and reading (61%). Results also indicated that SES, parent education, and rural versus urban residence (environmental constraints) had no significant impact on family participation in physical activity. While these studies gave

valuable descriptions of the activity habits of Hispanic female adolescents, they did not discuss what types of physical activities they enjoy doing, or would enjoy doing, if they had access to them.

Research has also determined that fundamental skills were a predictor of physical activity in adolescents. Specifically, adolescents who performed better on a battery of tests spent more time engaged in physical activity. This research was not specific to the Hispanic population, but does highlight the importance that skill plays in organized physical activity patterns (Okely, Booth, & Chey, 2004; Okely, Booth, & Patterson, 2001). Are there skills this population is typically taught? Are there activities they enjoy, but in which they are not participating? This study explored physical activity choices, reasons for those choices, and how task constraints impact the perceptions of fitness of adolescent females who self-identify as normal weight or overweight.

Over the past three decades the prevalence of obesity and sedentary behavior has increased in the youth population, particularly among Hispanic females. Previously discussed studies of on Hispanic children showed they tend to be less physically active and more overweight than Caucasian children. Crawford et al. (2001) concluded that these findings may be attributable to less participation in physical education classes, cultural influences (environmental), lower levels of moderate to vigorous physical activity or enjoyment of physical exertion (task), and motivation levels or gender (individual). Furthermore, despite finding support for the notion that girls tend to enjoy intense physical activity less, Brustad (1996) suggested the need for further inquiry into biological, individual, or psychosocial factors.

Guided by Newell's (1986) Model of Constraints, the purpose of this research was to use qualitative measures to explore the impact of individual, environmental, and task constraints on Hispanic female adolescents' perceptions of fitness. Specifically, the following research questions were addressed:

a) How do Hispanic female adolescents, who think of themselves as normal weight and overweight, define fitness and are there differences in definitions between these two sub-populations?

b) Are there differences in individual, environmental, and task constraints among Hispanic female adolescents who think of themselves as normal weight and overweight?

# CHAPTER TWO

## Review of Literature

Newell's (1986) Model of Constraints has been integral in the study of movement behavior in humans. Traditional and cognitive approaches to the development of movement (Gesell & Thompson, 1929; Kugler, Kelso, & Turvey, 1980) suggested coordination of movement was mediated by genes and the result of innate factors. Newell's (1986) model argues that movement is an issue of constraints imposed on action versus the result of genetic code or some staged instance of learning.

Constraints are boundaries, or features, that limit motion of the entity under consideration (Newell, 1986). The rate with which constraints may change over time and impact the degrees of freedom of movement varies greatly. Movement, therefore, is a compression of the many degrees of freedom available from any combination of these factors, or constraints, and serves to limit, discourage, permit, or encourage movement behaviors. Specifically, Newell suggests that movement arises from the coordination of interactions between three constraints; the organism, the environment in which movement occurs, and the task to be undertaken. If any of these three factors change, the result is a change in movement (Haywood & Getchall, 2001; Newell, 1986; Thelen & Ulrich, 1991)

Thelen and Ulrich (1991) incorporated Newell's model into a Dynamic Systems Approach (DSA), further suggesting that movement behavior is self-organizing and is a cooperative function within environmental and task contexts. Because movement is not

"hard wired," the task and context recruit and assemble the cooperative system, but neither the organism nor the environment has priority in explaining behavior change. Also, because behavior is not genetically predetermined, it is assumed that behavior will settle into certain attractor or preferred behavioral outputs that are determined by the individual, task, and environmental contexts (Thelen & Ulrich, 1991). The result of this interaction between constraints is that some behavior will occur and become more tightly constrained, skilled, and less easily interrupted. Other patterns, however, may become less reliable and more easily disrupted (Thelen & Ulrich, 1991).

An example of the DSA was Thelen's (1995) study of the infant-kicking reflex. This study concluded that the kicking reflex could be altered by changing the weight and resistance of an infant's legs. As weight and resistance increased, the reflex decreased and as weight and resistance were decreased the reflex increased. From this research it could be concluded that the infant-kicking reflex did not disappear simply as a function of the CNS, but because of the interaction between muscular strength and development in the infant. An example incorporating this model into the current study would be a 6$^{th}$ grade Hispanic girl who plays sports in her neighborhood. If her family were to relocate to another state, she may stop playing sports either temporarily or permanently. This would indicate that although individual factors of gender and race/ethnicity do not change, location, as an environmental constraint change would impact the task (or outcome).

### *Individual Constraints*

According to Newell (1986), individual (organismic) constraints are those which are in and of the individual. These constraints may be structural or time-dependent (e.g.,

height, weight, body composition, race/ethnicity) or functional or time-independent (e.g., motivation and activity level). These subsystems are a person's own unique physical and mental characteristics which are ever-changing in a non-predictive manner. In the current study, structural constraints, such as age, height, weight, and race/ethnicity were reported on a demographic survey. Further inquiry into functional constraints, such as physical activity level and motivation level, were examined to determine if and how they might shape participants' perceptions of fitness.

Height and weight may impact a child's fitness, not only of her own, but that of others as well. For example, height follows a sigmoid pattern of growth, as does weight, and is characterized by rapid growth in infancy, slow steady progress in childhood (6-8 years), and another rapid spurt in adolescence (13-15 years) before tapering off during adulthood. Although the body grows in a sigmoid pattern as a whole, specific body parts, tissues, and organs grow differently. Development is typically cepholocaudal (head to toe), then proximal distal (midline of body out to extremities), and finally general to specific. A study by Mirza, Kadow, Palmer, Solano, Rosche, and Yanovski (2001) found 60% of Hispanic adolescent children to be at less than the $50^{th}$ percentile in height. This shorter, more rounded stature might impact this population's perception of themselves and others with regard to physical fitness based on physical appearance.

Furthermore, physique refers to the configuration of the body as a whole. It is most often referred to as somatotype, which summarizes an individual, not only in terms of height and weight, but in the varying contribution of endomorphy, mesomorphy, and ectomorphy (Malina & Bouchard, 1991). Endomorphy is characterized by the predominance of the digestive organs and by softness and roundness throughout the

body. Mesomorphy is characterized by the predominance of muscle, bone, and connective tissue so that muscles are well-defined and prominent. Ectomorphy is characterized by linearity and fragility of build with poor muscle development (Malina & Bouchard, 1991). There appear to be changes in somatotype between 3-4 years of age and again at 8 years of age. The changes most likely reflect the redistribution of subcutaneous body fat, the development of muscle tissue, and the lengthening of the legs. Sex differences in somatotype center primarily on endomorphy and mesomorphy; on average, females are consistently more endomorphic than males (Malina & Bouchard, 1991) and this difference in body type might lead to varying conclusions by females about their own and others' levels of fitness.

Race/ethnicity, age, and gender all work in combination to shape children's ideas and beliefs as well. Females typically mature earlier than boys. Early maturers are often more endomorphic and late maturers more ectomorphic; therefore, the early maturer may be at higher risk for weight problems. If early maturers are more endomorphic and females are typically more endomorphic, then it stands to reason that early maturing females will experience greater body changes than males, particularly in weight. In addition, accumulation and distribution of adipose tissue are further examples of individual constraints which might impact participants' perceptions of their level of fitness. There is a rapid increase of fat during the first 6 months, which increases gradually until age 8 in both sexes (Getchall & Haywood, 2001). In boys, fat accumulation continues gradually through adolescence, but girls experience a more dramatic increase. Girls' average more subcutaneous fat than boys at all ages and the sex difference is more apparent on hips and buttocks. Boys, relative to girls, have more

subcutaneous fat on the trunk (Bouchard, Malina, & Perusse, 1997). In a study of 12-17 year-old girls from a variety of race/ethnicities, Adair and Gordon-Larsen (2001) concluded there is a relationship between early menarche in girls and obesity, and significantly higher proportions of Black and Hispanic girls experienced early menarche. In all racial/ethnic groups overweight prevalence rates were significantly higher in early maturers and significantly lower in late maturers. This literature suggests certain physiques may be more compatible with specific activities; therefore, somatotype and developmental stage may be constraints on Hispanic female adolescents' ideas about fitness by influencing physical activity level and preferences.

Structural constraints, too, can strongly influence female adolescents' activity levels and motivation. In a study of Hispanic adolescent females, Guinn, Semper, and Jorgenson (1997) determined that body image was significantly related to low self-esteem in this population. Fowler (1989) and Hultsman (1993) both suggested that adolescents with low self-esteem tend to avoid physical activity. Combining results of these studies, it can be predicted that overweight participants in the current study will perhaps lack the necessary motivation to be active and physically fit.

Gender may further impact participants' motivation toward physical fitness. Estimated levels of physical activity generally increase from about 5 to 6 years of age into early adolescence and then decline (Bouchard et al., 1997; Ewing & Seefeldt, 1992). The decline in habitual physical activity is more apparent in later adolescence and is more evident in medium and intense activities. For instance, Brustad (1996) found that adolescent girls, across all ethnicities, were less attracted to vigorous activity. This decline in activity could be related to physical changes, but also suggests it could be

attributed to changes in motivation towards social demands and other social tasks. These findings support Newell's notion of interaction between individual and environmental constraints.

In summary, according to Newell (1986), individual constraints are those factors, in and of the organism, that limit or encourage movement behavior. It is interesting to consider that gender and race are stable, while height and weight change as one ages, but they all may contribute to an individual's motivation and physical activity level. Furthermore, it must be kept in mind that Newell's model suggests individual constraints do not act alone, but are constantly influenced by environmental and task constraints. For example, Anderson, Crespo, Bartlett, Cheskin, and Pratt (1998) demonstrated an interaction between individual and task constraints by reporting vigorous activity levels (task) to be low in Mexican-American children aged 10-18 years (individual). Similarly, Lowry, Wechsler, Galuska, Fulton, and Kann (2002) found that over half of the Hispanic children (individual) in their study watched in excess of 2 hours of television (task/environmental) a day and that this sedentary activity was associated with being overweight in Hispanic females.

The current study aimed to explore how individual constraints specifically impact participants' perceptions of fitness and if there are differences in constraints between normal weight and overweight females. As the aforementioned research shows, ascertaining these specific constraints may be difficult. To achieve this, participants in this study were asked to discuss their own fitness level and what they would change about it. In addition, they were asked what they thought would happen if they stopped being active, and if they thought being fit was important and why.

*Environmental Constraints*

Environmental constraints are those which exist in the world around us. They can be physical in nature (e.g., heat, light, surface, weather) or sociocultural (e.g. geographic location, culture, family, SES). These factors exist outside of the body and influence movement behavior in an individual. Genetics control the timing and rate of an individual's growth and maturation, but extrinsic factors can also have a great impact, especially those influencing movement behavior. Traditional studies on environmental constraints studied the effect of rearing patterns (Gesell & Thompson, 1929) and the impact of cultural backgrounds (Super, 1976) and revealed variations in developmental timing versus a "hard wired" and predictable shift in movement behavior.

For the current study, environmental influences, including cultural background and family beliefs, parenting styles, and parent activity levels, were examined to determine if, and how they impact participants' perceptions of fitness. Particularly during the adolescent years, sensitivity to, and influence of environmental factors is heightened (Haywood & Getchall, 2001), strengthening the importance of this research for the Hispanic population.

Attention to the importance of the family in Hispanic culture has increased as the number of Hispanics living in the U.S. rises. The Hispanic culture in South America is primarily comprised of persons born of Spain's colonization and holds varying traditional values based on regional differences, acculturation stages, class mobility, and rates of marriage outside the culture (Zuniga, 1992).

Family research in this population continues to be conflicting. For example, Bean and Tienda (1987) argued that family relationships assume greater importance in the

Hispanic population because they are often recent immigrants from less developed countries. It might be expected they would adhere more closely to traditional marriage, family, and household behavior of their culture. Research by Jacobsen (1995) challenges Bean and Tienda (1987) by suggesting that Latino families have followed the general pattern of decline in the husband-wife households in the U.S., with a rise in the prevalence of multigenerational, female-headed households and non-family households. This might suggest that as Hispanic households become more similar to Caucasian households, race/ethnicity may not remain as strong an individual constraint. Sherman et al. (1995) also noted that Mexican American families had a larger family size, with lower parent education levels and income status. The retreat from conventional marriage and family patterns combined with low education levels, have been shown to be linked to child poverty and disparities in the economic well-being of Hispanic children (Crawford et al., 2001; Eggebeen & Lichter, 1991).

From 1960-1990, Hispanics consistently fell behind Caucasians in income attainment. By 1990, per person income in Hispanic households was barely half that enjoyed by Caucasian families. Furthermore, 40-50% of Hispanic households were headed by single females (Jacobsen, 1995) These statistics, in addition to high fertility rates, levels of immigration, long life spans, and less economic resources, could possibly reinforce whatever tendency there might already be toward impoverished multigenerational households in this family-oriented culture.

Despite supposed changes in traditional household structure in the Hispanic population, evidence suggests there is still an adherence to a set of traditional family values, including a deep sense of family loyalty, extended family support network, and an

emphasis on interpersonal relationships and mutual respect. (Harwood, 1992). Personalism is another strong Hispanic value which emphasizes inner importance, dignity, and respect despite socioeconomic status, which is commonly emphasized in Caucasian culture. Traditional male and female role configurations have been relaxed, mostly due to female employment (Garcia-Coll et al. 1995; Harwood, 1992) and emphasis is placed on close mother-child relationships, interpersonal responsiveness, and the development of proper demeanor (Harwood, 1992; Zuniga, 1992).

Research on parenting styles in the Hispanic culture is somewhat conflicting. Some reports indicate Hispanic parents are permissive, while others report they are authoritarian (Julian, McHenry, & McKelvey, 1994; Vega, 1990). Fuller, Holloway, and Laing (1996) argue that Latino families have consistently been shown to endorse warm parenting practices and collective forms of obligation over individualism. Toth and Xu (1999) further suggest that because Hispanic groups tend to have higher fertility rates and larger families, it could be concluded they place a higher value on parenting. Locke (1992) also suggests that there seems to be a greater concern for monitoring girls in the Hispanic culture, as opposed to boys.

Research on Hispanic fathers concludes they may still hold more traditional views about marriage, mothering, and the role of the wage earner; however, the machismo stereotype is perhaps not an accurate depiction (Hofferth, 2003; Jambunathan, Burts, & Pierce, 2001). Despite traditional beliefs, the trend in the Hispanic culture tends to be toward a more egalitarian home. Hispanic fathers are more likely to spend time with their children and reinforce the norm of family closeness, expecting their children to respect authority (Jambunathan et al., 2000; Locke, 1992).

Hofferth (2003) suggested that father control (as a negative aspect of parenting) may be a function of quality and racial/ethnic composition of neighborhoods. In particular, a homogenous community may support ethnic traditions and maintain a sense of community cohesion and pride, leading to greater involvement by fathers versus control. Hofferth (2003) also concluded that Latino fathers exert less control over their children in the context where responsibility for child rearing is shared with extended kin. Therefore, greater familistic orientation in Hispanic communities could increase the value of fathers spending time with children (Baca-Zinn, 1994). Another important finding of Hofferth's research (2003) was that income and father involvement were linked when a lower income typically equated to less monitoring of children by Hispanic fathers.

Research specific to the influence of Hispanic mothers suggested they are more empathetic with their children than mothers of other ethnicities and have less appropriate expectations of their children (Jambunathan et al., 2000). As previously mentioned, Hispanic homes are becoming more egalitarian and Hispanic mothers are more apt to reverse roles with their children and expect them to be care-takers, rather than being taken care of, as well as taking responsibility for household chores (Garcia-Coll et al.1995; Jambuthanan et al., 2000). Hispanic mothers are also less apt than mothers of other ethnicities to use corporal punishment on their children (Jambunathan et al., 2000). As previously mentioned, Hispanic parents are thought to be less concerned with achievement and developmental milestones in comparison to Caucasian mothers in the U.S. (Zuniga, 1992). However, Jambunathan et al. (2000) argue that Hispanic mothers may actually have greater inappropriate developmental expectations of their children. It is thought this could be, in part, because of bi-culturalism (i.e., coming from one culture

and raising children in another) in immigrant parenting. In other words, Hispanic mothers may have higher unrealistic expectations of their children as compared to mothers of other races/ethnicities because they are raising their children to adhere to two sets of cultural beliefs.

Environmental constraints may further impact children's perceptions of fitness via parental involvement and attitudes about physical activity. General similarity of activity patterns of children and their parents is commonly reported (Bouchard et al., 1997). Evidence shows that active fathers or mothers are more likely to have active offspring than inactive parents. When both parents are active, children are five times more likely to be active than children of non-active parents (Bouchard et al., 2000; DiLorenzo, Stucky-Ropp, VanderWal, & Gotham, 1998; Haywood & Getchall, 2001). Eccles and Harold (1991) concluded that a child's perception of the value of his/her sports involvement to parents was related to children's self- perceptions of ability and these perceptions were positively linked to sports involvement.

Differences in perceptions by gender were also suggested. Brustad's (1996) study with children further supported Eccles and Harold (1991) by concluding gender was directly linked to conceptions of ability in physical activity in that boys reported higher perceived competence than girls overall which might encourage them to be more active. Traditionally, physical activity and sports have been gender-typed in western society. Certain sports are considered masculine and others feminine. In addition, physical activity, particularly vigorous activity, is thought to be more important for boys and is often more encouraged for boys than for girls. Because of society's reinforcement of sedentary types of activities, girls may self-select away from vigorous play. It may also

encourage them to drop out sooner (Haywood & Getchall, 2001; Malina & Bouchard, 1991).

In a study of a diverse population of 6th grade children, Brustad (1996) revealed that parental encouragement and parental enjoyment of physical activity were significantly related to children's perceived physical competence and attraction to physical activity. Parental influence further resulted in children having a stronger attraction to physical activity because of favorable peer relationships and greater interests in games and sports. Brustad (1996) further concluded that ethnicity was not a significant contributor to differences among children in patterns of parent influence or attraction to physical activity.

Related research on environmental constraints demonstrates that socialization in the family unit exerts tremendous influence on health-related behaviors in children, such as being physically fit. For example, Stucky-Ropp, DiLorenzo, and Di Lorenzo (1993) posed that social learning variables may be important correlates to physical activity in children. In their study with 5th and 6th grade children, the most salient determinants of activity for girls were found to be enjoyment of activity, access to exercise-related items at home, mothers' perceived support for physical activity, mothers' perceived barriers for exercise, and direct parent modeling of physical activity. Further study by DiLorenzo, Stucky-Ropp, VanderWal, and Gotham (1998) concluded that for girls in 5th and 6th grade, enjoyment of exercise was the only predictor of activity level. For 8th and 9th grade girls, however, their exercise knowledge, their mothers'physical activity level, and modeling/support by friends were the strongest predictors. Longitudinally, this study further concluded that a mother's exercise self-efficacy, perceived barriers to exercise, a

child's enjoyment and self-efficacy for exercise were important variables for girls. In addition, research has also suggested that education plays a role in Hispanic mothers' health beliefs and behaviors, i.e., higher education positively impacts health behaviors (Crawford et al., 2001). It is important to note that participants for most of these studies were primarily Caucasian, which reinforces the desirability of the population in the current study.

Research on Hispanic families has also examined how parents' beliefs and perceptions might further impact their children. McArthur, Anguiano, and Gross (2004) concluded that the Hispanic culture's deep rooted belief in God often leads them to view life events as acts of God. That said, perhaps an overweight or unfit child is perceived as the will of God. A study by Vega (1990) stated that Hispanic families hold a strong belief in solidarity and typically do not seek outside advice or help. In contrast, McArthur, Anguiano, and Gross (2004) found that Hispanic parents reported they believed that overweight children should be advised by health professionals or nutritionists. The conflicting result in this study is that Hispanic parents, particularly mothers, were likely to view chubbiness as the ideal body and less likely to see their children as overweight. Thus, Hispanic parents might not feel the need to seek outside help if they do not recognize a problem.

The aim of the current study, therefore, was to examine and expose the environmental constraints which might impact adolescent Hispanic females' perceptions of fitness. For example, Crespo (2000) reported that adult Hispanic females are typically less physically active than their Caucasian counterparts and Sternfeld, Ainsworth, and Quesenberry (1999) found that Hispanic women were more likely to feel like they had

little time to exercise because of household/caregiving activities. How might this influence what participants think and believe about fitness? What conclusions do they draw from the activity level of their parents? In addition, cultural perceptions of ideal body size influence child rearing practices in this culture. How do Hispanic mothers' and fathers' child rearing practices influence their daughters' perceptions of fitness? Does it serve to encourage or discourage them? What, if anything, is a barrier to physical fitness among Hispanic girls? Research on parenting styles in the Hispanic culture is conflicting. Is parenting style an environmental constraint that limits or encourages adolescent females to be fit? In an effort to answer some of these questions and determine the influence of environmental constraints on Hispanic girls' perceptions of fitness, participants were asked to discuss where they learned about fitness, who was most fit in their family, who/what had encouraged and/or discouraged them, and what, if anything might prevent them from being physically fit.

### *Task Constraints*

Newell (1986) proposed that task constraints are external factors which impact movement behavior in children. Newell further identified three categories of task constraints: (1) the goal of the task; (2) rules pertaining to the task; and (3) implements or machines involved in the task.

All tasks have goals that relate to the outcome of the action, however, how the performer may satisfy this goal is not specified. In some skills, task constraints can impact the physical or dynamic nature of movement behavior. Rules regarding an event or of a specific skill impact the outcome of the performance, for instance, in gymnastics,

the rules dictate a certain number of skills must be performed. In the breaststroke, there are boundaries to the movement patterns allowed by individual performers. The individual's task is to optimize performance within imposed task constraints (Newell, 1986). In some cases, team performance is emphasized over the individual performer, thus impacting children's involvement in the activity. Physical activity can also take place in a leisure or organized setting, which could have a bearing on effort, equipment, play space, and rules etc.

The third category suggests an object or implement could be a task constraint. Objects used for grasping, lawn mowers, cars, bikes, bats, balls, gloves, and basketball hoops would be examples in this category. For instance, the size and weight of task objects would serve as constraints. Perhaps only having access to a bike that is too big would inhibit one's desire to ride, whereas a bike made to fit the child might encourage the activity. With respect to equipment, an increasing number of sporting goods manufacturers have produced equipment developmentally scaled to various age groups of children; however, not all children have access to it. This is another application of Newell's notion of interaction between environmental (opportunity) and task (equipment) constraints.

Perhaps the key task constraints are related to activity choices and preferences. Research in the area of task constraints is limited, particularly for the target population of the current study. Studies of youth similar in age to participants in this study showed gender differences exist in play patterns, in that boys are often more active overall and receive more reinforcement than girls in sports and physical activity (Branta, Painter, & Kiger, 1987; Garcia, Norton, Frenn, Pender, & Ronis, 1995; Sallis et al., 1993). As

previously mentioned, Brustad (1996) suggested girls across ethnicities prefer less vigorous types of activities compared to boys. A study by Faucette, Sallis, McKenzie, et al. (1999) examined 4th and 5th graders' physical activity levels and choices. Results showed no gender differences in the three most frequently used activities and two of the three were of a high intensity. However, girls frequently selected low intensity activities and boys selected medium intensity activities. Girls more often participated in individual activities, such as gymnastics, jump rope, and dance, and boys chose team sports such as football, baseball, and basketball. This research suggests a strong relationship between gender and task constraints.

Haywood and Getchall (2001) and Malina and Bouchard (1991) further implied that sports may be gender-typed in western society and that some sports are perceived as masculine and others feminine. This perception might explain, in part, the reinforcement of boys in vigorous activity and of girls in more sedentary type activities. If girls do not perceive an activity as appropriate for them, they might be more apt to self-select away from it or drop out sooner.

Research specific to the target population of the current study concluded that activity levels are lower among Hispanic children as compared to Caucasian children (Crawford et al., 2001) because they participate less in physical education or engage in less physical activity. In addition, a study with young Mexican American children (McKenzie, Sallis, Broyles, Nader, & Nelson, 1992) found that Mexican American children were less active than Caucasians at home and during recess. It was also determined that Mexican American children spend more time with adults and had access to less active toys. The economic environment an individual is born into, and in which

he/she is reared, is of primary importance to physical fitness. An adequate environment for play, such as a playground or backyard, can provide needed opportunities for children to participate in physical activity. Without play space, interest may diminish or a limited selection of activities may occur. For example, in urban areas, sports like basketball which requires little equipment and space may be more popular. In other words, environmental constraints (an urban area) interact with task constraints (equipment, play space) to determine physical activity behavior.

Literature has also demonstrated how weather as a physical environmental constraint might influence children's ideas about fitness. In a pilot study by Munk, Ewing, and McCann (2002), 9 and 10-year-old Caucasian children reported being more active during the warmer months and less active during the winter season. Weather was an environmental factor in another study by Baranowski, Thompson, DuRant, Baranowski, and Puhl (1993). This research examined a small tri-ethnic sample of young children and found seasonal differences in activity levels. Boys were more active and played outside more than girls, even during months with extreme temperatures (hot or cold). It was also determined that all children were more physically active when they played outside versus playing indoors. These studies further demonstrate Newell's notion of interaction between constraints. In this case, individual factors (age, race/ethnicity, physical activity level) and environmental factors (adults, access to active toys, weather) interact to influence children's perceptions of fitness at a young age.

A study on the relationship of physical activity to fundamental movement skills in a non-diverse sample of adolescents (Okely, Booth, & Patterson, 2001) concluded that fundamental skills were a significant predictor of physical activity in adolescents.

Specifically, adolescents who performed better on a skills battery test spent more time engaged in physical activities. The percent of variance in this study was small, but does suggest that movement skills and organized physical activity may be reciprocal determinants. That is, higher skills may increase options for participation. In a more recent study with a non-diverse population of 4th, 6th, 8th, and 10th graders, Okely, Booth, and Chey (2004) discovered that body composition and waist circumference were related to fundamental motor skill ability in boys and girls. Overweight children (high body fat and large waist circumference) were less likely to possess high levels of running and jumping skills and more likely to possess low levels of these skills than normal weight children. This study also concluded that body composition was unrelated to object skill proficiency such as throwing, catching, striking, and kicking.

This research suggests an interaction between individual (weight) and task (locomotor skills, object skills) constraints. This relationship highlights the importance that skills play in organized activity patterns of adolescents. Perhaps adolescents will select tasks which they feel competent in and engage in them longer. These studies also point to the need for research with diverse populations, another piece of evidence supporting this particular research.

In the current study, task constraints were examined by asking participants what types of physical activities they enjoyed doing and why they liked to do them. In an attempt to find out what task constraints might encourage them, they were asked to discuss what, if anything might get them or someone they know to become fit.

The Hispanic population is currently the fastest growing population in the United States. Health concerns for the children of this population continue to grow, particularly

in Hispanic girls. As past literature on children and physical activity behavior is examined, it has often taken a narrow or simplistic view. For example, research has examined why kids participate and what types of activities they like to do (Ewing & Seefeldt, 1992) the influence of parents, family, and culture (Brustad, 1996; Eccles & Harold, 1991; Malina & Bouchard, 1991); gender differences (Branta, Painter, & Kiger, 1987; Malina & Bouchard, 1991); and maturation (Bouchard et al.,1997; Malina, 2002). Little exploration of the thoughts, ideas, beliefs, and perceptions of Hispanic girls has occurred. What do Hispanic girls really know and where have they learned about fitness? What are their perceptions of themselves and others around them? How important is fitness? What would keep them from or encourage them to be active?

Current literature continues to suggest a strong need for further inquiry into this population. For example, Sallis, Bouno, Patterson, Atkinson, and Nader (1988) concluded that while family influences might be important determinants of physical activity in children there are many other forces operating concurrently, such as personal attributes, exercise history, peer influences, and opportunity which need to be examined. Brustad (1996), Eccles and Harold (1991), and Garcia-Coll et al. (1995) all recognized that one implication of their work was the need for further research with diverse populations of youths. Moreover, studies which focus specifically on Hispanic girls are limited and provide mostly a quantitative view. These are just a few examples which reinforce the importance of the current study.

Current research also lacks information about children's perceptions and the impact their thoughts, ideas, and beliefs have on their behavior. Newell's (1986) model of constraints, which was originally designed as an innovative means to study motor

behavior in humans, provides an ideal framework on which to expand the literature. The premise of this model is that movement results from interaction between the individual, the environment, and the task. It also proposes that one constraint does not dominate the other and that interaction between these factors is constant and ever-changing.

The purpose of this study was to use Newell's model to examine perceptions of fitness among Hispanic adolescent females in an attempt to gain understanding and ultimately improve fitness levels of the target population. Specifically, this study asked participants to define fitness and to discuss their own personal fitness level. An effort was also made to expose individual, environmental, and task constraints which might influence their perceptions of fitness. Lastly, it was the aim of this research to determine if there are differences in these constraints between normal weight and overweight Hispanic adolescent girls.

# CHAPTER THREE

## Methodology

### *Participants*

Participants for this study were 23 adolescent female middle school students who identified themselves as Mexican American/Hispanic on a demographic survey. These youth were between 11 and 13 years of age. Participants were selected based on self-descriptions of themselves as either overweight or "about right." The population for this study was drawn from schools where more than 50% of the students qualified for the free lunch program or from individual families who were enrolled in the free lunch program at their school. This critical-case sample (Patton, 2002) was used because it would yield the most information and impact the development of knowledge with limited time and resources.

### *Measures*

#### *Demographic Survey*

The demographic survey (see Appendix A) was developed similar to that used in a study by Rainey, McKeown, Sargent, and Valois (1998). This survey assessed participants' age, race/ethnicity (African American/Black, Mexican American/Hispanic, Native American, Middle-Eastern American, White/European American, Asian-American/Pacific Islander, or Multiracial), and gender. In addition, participants were asked to describe themselves in terms of height (shorter than most, same height as most, taller than most), weight (underweight, about right, overweight), and activity level (less physically active than most, equally as physically active as most, more physically active

than most). Children were asked to rate the activity level of their parents/guardians as being very physically active, somewhat physically active or not physically active. Participants were also asked to briefly describe their own physical activity level over the past seven days, including level of intensity and type of activity in which they engaged. Table 1 displays the demographic information of those participants who identified themselves as normal (N=8) or overweight (N=7).

Table 1

*Demographic Characteristics of Participants who Self-Identified Normal or Overweight*

| *Category* | *Normal Weight* | *Overweight* |
|---|---|---|
| | N | N |
| Height | | |
| Shorter than most | 1 | 0 |
| Same height as most | 4 | 5 |
| Taller than most | 3 | 2 |
| Physical Activity Level | | |
| Less active than most | 1 | 4 |
| Equally active as most | 5 | 2 |
| More active than most | 2 | 1 |
| Father/Male Guardian Activity Level | | |
| Very active | 2 | 3 |
| Somewhat active | 5 | 3 |
| Not active | 1 | 0 |
| Omitted | 0 | 1 |
| Mother/Female Guardian Activity Level | | |
| Very active | 3 | 2 |
| Somewhat active | 5 | 5 |
| Not active | 0 | 0 |

| | | |
|---|---|---|
| Intense Activity/Last 7 Days | | |
| 0 days | 1 | 0 |
| 1-2 days | 1 | 1 |
| 3-4 days | 3 | 3 |
| 5-7 days | 3 | 3 |
| Stretching/Last 7 Days | | |
| 0 days | 2 | 0 |
| 1-2 days | 0 | 1 |
| 3-4 days | 3 | 1 |
| 5-7 Days | 3 | 5 |
| Strength Exercises/Last 7 Days | | |
| 0 days | 1 | 0 |
| 1-2 days | 3 | 4 |
| 3-4 days | 2 | 1 |
| 5-7 days | 2 | 2 |

*Interview Guide*

To obtain specific information about children's perceptions of fitness a standardized open-ended interview format (Patton, 2002) was used to conduct interviews with participants (see Appendix B). This method of inquiry minimized variation in the questions posed to interviewees while allowing for flexibility in asking follow-up questions. It also reduced the risk of bias by asking each participant the same questions in the same sequence. This method also made it possible to interview students in an efficient and predictable manner, thus minimizing the interruption of regular class time.

Guided by Newell's (1986) Model of Constraints, questions were organized in three sets which examined the impact of individual constraints (e.g., motivation, fitness level), environmental constraints (e.g., cultural influences, SES, parents), and task constraints (e.g., types of activities, favorite activities) on participants' perceptions of

fitness. The interview guide was constructed using several types of questions described by Patton (2002). For example, participants were asked knowledge questions (e.g., How would you define fitness?); experience/behavior questions (e.g., How fit or in shape do you think you are? Where did you learn about fitness?); opinion questions (e.g., What would you change about your current fitness level? Who in your family is most physically fit?); feeling questions (e.g., Has anyone or anything discouraged/encouraged you from being physically fit?); and time frame questions (e.g., What would happen if you stopped being physically fit? What might get you or someone you know to become physically fit?).

The interview guide used for this study was reviewed by two expert researchers familiar with the population in this study. In addition, the script was rehearsed with an adolescent female prior to the start of the research. Both of these measures were used to determine if questions could be easily understood by participants, but not bias their thinking and responses.

### *Procedures*

Following approval from the Michigan State University Committee for Research Involving Human Subjects (see Appendix C), the participating physical education teachers, classroom teachers, and principals were contacted to obtain permission to begin the research. The researcher visited all participating schools to explain the study and solicit parental consent (see Appendix D). A meeting then took place with students in a private room recommended by the participating teachers. Consent forms (both English and Spanish), including a cover letter from the teacher (see Appendix F), were sent home

with 23 students from three different schools and 19 were returned, resulting in an 82% response rate.

Schools continued to be contacted and this process repeated until enough subjects were recruited. To encourage participation, students were given a small financial incentive for parental consent forms that were returned within two days. Upon completion of the consent process, assent forms were completed (see Appendix E), and demographic surveys were distributed to the students by the investigator for completion during their regularly scheduled class time.

All completed forms were collected by the researcher and sorted into two piles: one for those who thought of themselves as overweight and one for those who thought their weight was about right. No participants described themselves as underweight. Fifteen participants for the interview portion of the study were then immediately selected. To ensure random selection, all potential subjects' surveys were grouped based on weight category and assigned a number. Numbers were then randomly drawn by the researcher to determine who would be interviewed and in what order. The selected participants met with the investigator in a private room designated by the teacher to complete a 30-minute audio taped interview. All interview subjects were escorted to and from the interview room by the researcher. Interviews at individual schools took place during sequential classes and days to limit the possibility of students sharing information with each other.

Prior to the interview, participants were given a brief overview of the study. Each participant completed one practice question to test the audiotape equipment and was reminded they could withdraw or refuse to answer any question at any time. Participants were encouraged to ask any questions they had about the procedures and were asked to

disclose if they knew anything about the study. Once participants stated they were ready, interviews began. Participants were debriefed at the conclusion of the interview and asked not to discuss their responses to questions with their classmates until all interviews were completed. All participants received a $10 gift certificate at the conclusion of their interview. The researcher then recorded retrospective observation notes to record children's appearance, behavior, and non-verbal cues (see Appendix G).

### *Data Analysis*

The qualitative methods employed in this study were based on procedures outlined in qualitative texts (Denzin & Lincoln, 1994; Patton, 2002). All interviews were tape recorded and then transcribed verbatim. The transcribed data for all interview responses were then organized with the corresponding research question using deductive analysis. Responses to each question were further organized into normal weight and overweight sub-groups. The primary investigator and a second experienced researcher in qualitative research independently familiarized themselves with the raw data, compared and contrasted it, and used inductive analysis to organize it into first and second order themes. These two researchers then met to collaborate on findings.

When consensus between the two researchers was reached, investigator triangulation was employed (Patton, 2002). This process incorporated use of a third researcher, who was familiar with the study, as a reliability check for the inductive analysis. This researcher followed the same content analysis procedure. Finally, all three researchers met and discussed similarities and differences until consensus was attained.

# CHAPTER FOUR

## Results

The aim of the current study was to explore Hispanic adolescent females' perceptions of fitness. This chapter reports general dimensions according to the three areas of constraints described in Newell's (1986) model. Data relevant to individual constraints included participants' definitions of fitness, perceptions of own fitness level, changes participants would make in their current fitness level, and their perceptions of the value of fitness. Results related to environmental constraints included participants' sources of knowledge about fitness, perceptions of fitness in family members, perceived barriers to fitness, perceived sources of encouragement, and perceptions of potential barriers to fitness in the future. Finally, responses relating to task constraints included physical activities engaged in by participants, and perceptions of what factors would initiate fitness (See Appendix H).

### *Definitions of Fitness*

To begin examining perceptions of fitness, overweight and normal weight participants were asked to define physical fitness and/or to describe someone they thought was physically fit. Specifically, two questions were asked: (a) How would you define fitness? What do you think being physically fit is?; and (b) Can you describe a boy or girl that you think is physically fit? The goal of these questions was to explore not only cognitive knowledge of fitness, but also to allow participants to describe physical

characteristics that might be associated with physical fitness should they struggle with a definition.

While responses revealed two similar second order themes, one difference in defining fitness was found between overweight and normal weight groups in first order themes. Specifically, normal weight girls reported three second order themes including play sports, health-related, and positive affect as definitions of fitness. For overweight girls only the higher order themes of health-related and play sports emerged (see Tables 2 and 3).

Table 2

*Definitions of Fitness-Normal Weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 8 | Play sports | Play sports |
| 6 | Do a lot of exercise | Health-Related |
| 3 | Be a normal weight | |
| 2 | Have muscles | |
| 1 | Cardiovascular fitness | |
| 4 | Enjoyment | Positive Affect |

Table 3

*Definitions of Fitness-Overweight Group*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 6 | Regular exercise | Health-Related |
| 3 | Physiological health | |
| 2 | Being a normal weight | |
| 1 | Have muscles | |
| 1 | Eat healthy | |
| 3 | Play sports | Play sports |
| 1 | Able to do all sport activities | |

*Normal Weight Group*

*Play sports.* Overall, the majority of the normal weight girls defined physical fitness or described someone they thought to be fit by making reference to playing sports, being good at sports, or looking capable of playing sports. The following quotes are some examples of this definition:

...playing sports...

...she's really active. She is good at any sport we play...

...play sports. If it's not with your school, at least with your family...

...joining sports and trying out stuff...

...he looks like he is capable of doing sports like football, soccer...

*Health-related responses.* Many of the participant's definitions also included reference to health-related components. The most common response was that physical

fitness involves "doing a lot of exercise." The following are three examples of health-related definitions:

> ...you have to be really good physically...do a lot of exercise, so you can be in good shape and won't have bad health...
>
> ...they run a lot and exercise...
>
> ...they would like do a lot of physical activities like running, jumping, swimming...

Participants further defined fitness in relation to being normal in weight. One girl thought fitness was something to do when you want to lose weight, while two others characterized a fit person in the following ways:

> ...if it's a girl, they are skinny...
>
> ...They would be medium...they are not too fat or skinny...

A third way this group cited health-related reasons was describing someone they thought to be physically fit as having muscles. It was interesting to note that both quotes reference males:

> ...if it's a guy, they would have muscles...
>
> ...he's not scrawny...

A fourth and final health-related response described someone they thought to be physically fit by referencing cardiovascular fitness:

> ...when they run, they don't breathe heavily...

*Positive affect.* Definitions of fitness given by the normal weight group expanded beyond sport and physical health-related responses to a more affective approach. Four participants defined being physically fit in terms of enjoying the activity itself:

... I like it a lot cause I don't like being in the house sitting down. Everyday I have to do something fun... I get bored...

...It is fun and it's a great way to stay in shape...

...well, I do like physical fitness, I would like to play sports and I like sports...

... [my friend] she told me she likes it [physical fitness] a lot and she told me I should do the same things she does.

*Overweight Group*

Despite similar second order themes, differences between normal and overweight participants occurred in the frequency of health-related versus play sports responses.

*Health-related definitions.* Results of discussions with overweight participants about their definitions of fitness revealed five first order themes. The most common response referenced regular exercise. The following are some examples:

...like exercising everyday...My uncle, he has a gym in his house and he lifts weights and goes to exercising places...

...a good activity level...they like to do a lot of physical activities...

...like walking, exercising, things that I don't do...like she stretches a lot and runs so fast and that stuff...

Three of the respondents further defined fitness in physiological terms stating fitness is, "being in shape," "keeping your body healthy," or "you are healthy." Two members of the group described someone as physically fit because, "she has a good shape, she's not real big or real skinny, she's just normal" and "they may not be overweight." In addition, one of the girls defined a friend as fit stating, "she eats kind of healthy," and another characterized a male as fit because, "he has muscles."

*Play sports.* The other second order theme that emerged defined fitness as playing sports. Three of the overweight girls responded that physical fitness involves playing and/or liking to play sports:

> ...I think my friend. She's really physical because she likes to play sports a lot...
>
> ...it's [physical fitness] like doing sports and all that stuff...
>
> ... they are active and they like to play a lot of sports...like my Dad, he likes to play sports and stuff, especially basketball. He has a team like every Sunday he plays baseball. They go to the park and play baseball and stuff. He is always running around and he lifts weights and stuff...

In addition, one youth thought physical fitness was being able to do all sport activities in physical education class:

> ...I really like how she is because she does everything that the teacher tells her to...

It is interesting to note that while similar themes emerged for the two groups, differences in their definitions were demonstrated. Normal weight girls clearly linked fitness with playing sports, whereas overweight girls defined fitness in more health-related ways. In contrast to the overweight group, normal weight participants also defined fitness as being fun or stated they liked physical activity.

### *Perceptions of Own Level of Physical Fitness*

To examine participants' perceptions of their own level of physical fitness, normal and overweight girls were asked the question: How fit or in shape do you think you are? Once they responded good, moderate, or poor, they were asked, What are some reasons for why you think this? How do you know you are or are not fit or in shape?

Results revealed most of the normal weight girls perceived themselves as having a good level of fitness and a majority of the overweight group perceived themselves as having a poor level of fitness (see Tables 4 and 5).

Table 4

*Participants' Perceptions of Own Level of Physical Fitness-Normal Weight*

| *Level* | *Number of Quotes* | *Supporting Quotes* |
|---|---|---|
| Good | 7 | Enjoy activity / Am active |
| | | ...I like gym, I like to run, I like to play basketball, volleyball, and sort of soccer, and I like to run around my house... |
| | | ...I think I'm in good shape because I play soccer with my brother and my sister sometimes. And I guess anytime I have time to play with my younger siblings, I do... |
| | | ...Well, I do like playing basketball, soccer, I'm not on a team, but I think I am in good shape |
| | | Active once in a while |
| | | ...I like to do it (exercise), but not that much and like some people don't do it at all. |
| | | ...I'm very active... I'm active once in a while |
| | | Normal weight |
| | | ...I'm not too obese or too skinny... |
| | | ..but I'm not really skinny... |
| Moderate | 2 | Active part of the time |
| | | ...cause most of the time when I'm not playing outside its just doing homework and sitting down and doing other work for school, so it is half and half... |
| | | ... I think I'm kind of in shape, cause I do play everyday outside and I do walk outside for twenty minutes with my mom, so I think I'm kind of in shape... |

| | | |
|---|---|---|
| Poor | 2 | No activity level<br><br>...I know because I don't do nothing. Like usually in gym I usually sit out or don't get dressed or I don't bring gym clothes. And I like, instead of doing what I'm supposed to do, just play around, like on the tennis courts I just play around with the ball...<br><br>Not skinny<br><br>...I think I'm between medium and fit because I'm not skinny... |

Table 5

*Participants Perceptions of Own Level of Physical Fitness-Overweight*

| *Level* | *Number of Quotes* | *Supporting Quotes* |
|---|---|---|
| Good | 1 | Because play sports<br><br>...I think I'm pretty in shape because I like to play a lot of sports and soccer and stuff...I'm pretty good at them, too. |
| Moderate | 2 | Diet is poor<br><br>...I don't eat very healthy, but I like to exercise and play sports |
| | | Overweight<br><br>...I think I am a little bit overweight<br>...Cause I'm a little overweight |
| Poor | 5 | Don't like / Don't do exercise<br><br>...I don't exercise everyday...<br>...I don't exercise at all...<br>...Because I don't exercise a lot...<br>...I like some football and all that, I just don't like playing them for a really long time...because some sports, I don't like running... |

A majority of normal weight participants perceived their level of fitness as good due to enjoying activity, being active once in a while, or not being too obese or too skinny. Normal weight participants who perceived themselves as moderately fit cited being active part of the time as the reason. Girls who rated their fitness level as poor perceived inactivity and not being skinny as the reasons. The majority of the overweight group, on the other hand, viewed themselves in poor shape, most frequently citing lack of or not liking exercise, or being overweight as the reason. Overweight girls who perceived themselves as moderately fit cited a poor diet and being overweight as reasons. In addition, one girl said her level of fitness was good because of her involvement in sports.

Participants' perceptions of their own fitness level varied greatly in that the normal weight group evaluated themselves more positively overall than the overweight group. Normal weight participants thought they were fit because they were physically active. In contrast, overweight participants thought they were unfit because they were inactive. Both groups cited weight as a reason for being in poor or moderate shape, although normal weight girls also perceived themselves as fit because they were not too big or too thin.

### *Perceptions about the Consequences of Discontinuing Physical Activity*

In order to determine what normal and overweight girls thought might happen as a consequence of discontinuing physical activity, they were asked one question: What do you think would happen to you if you stopped being physically active? If participants identified they were not physically active, then they were asked a variation of the same question: What do you think would happen to someone if they stopped being active?

Three second order themes emerged for both groups as a result of discussions. Both groups suggested that discontinuing physical activity included a health component, physical component, and social component (See Tables 6 and 7).

Table 6

*Consequences of Discontinuing Physical Activity-Normal Weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 3 | Lose health | Health component |
| 3 | Get sick | |
| 2 | Eat more | |
| 2 | Gain weight | |
| 2 | Watch more TV | Physical Component |
| 1 | Love fitness capacity/ become lazy | |
| 2 | Be bored | Social Component |
| 1 | Try to motivate others | |

Table 7

*Consequences of Discontinuing Participation-Overweight Group*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 4 | Gain weight | Health component |
| 1 | Eat junk food | |
| 1 | Be less healthy | |
| 1 | Get sick | |
| 2 | Get lazy | Physical Component |
| 1 | Lose ability | |
| 1 | Be bored | Social Component |
| 1 | Wouldn't be as nice | |

*Normal Weight Group*

*Health component.* The normal weight group perceived many negative consequences related to discontinuing physical activity including losing health, getting sick, eating more, and gaining weight. The following are examples of some of their responses:

> ...I wouldn't be in good health...
>
> ...I might not look the way I do right now. I might look a little chubbier or eat more sugar...
>
> ...Maybe they will go up in weight...
>
> ...They could get sick if they don't do a lot of exercising...

*Physical component.* Two normal weight girls stated that discontinuing physical activity might result in an increase of sedentary habits. One girl said if she was not physically active, "I would probably just sit and watch TV all the time." Another stated, "I would just be sitting around and watching T.V." Still another thought that if someone who had been physically active in the past suddenly stopped being active, they would experience a loss of the ability to do physical activities they had gained:

> ...They would probably lose the physical activity they could do. Like if they don't do pull-ups or any exercise for like a month or two, then I guess they will go down more and they won't be able to do it as much because they are so lazy...

*Social component.* Normal weight participants concluded that deciding to stop being physically active could have social consequences, in addition to health, and physical implications. The responses in this theme varied greatly. One girl took a motivational approach to this question stating if someone stopped being active, "I would convince them to keep on being active, like to run with me to the park and stuff." Two other subjects simply thought that life without physical activity would "just be boring."

*Overweight Group*

*Health component.* For the overweight group the most frequent responses involved gaining weight. Four girls stated they believed if someone stopped being active, "He would be overweight or something," "They would gain weight," "They would get overweight," or referring to herself one girl said, "I would probably get real fat."

*Physical component.* Overweight participants responded similarly to the normal group by suggesting sedentary behavior might increase and ability to be physically active decrease as a result of discontinuing physical activity. One girl stated if someone were

not being physically active "they would probably be getting lazy." Another responded to how being inactive would impact her, by saying:

> ...I might not feel like doing a lot of stuff and be kind of lazy

In addition, one overweight respondent concluded that fitness capacity would regress if someone stopped being active:

> ...they will just get into really bad shape...and the things they used to do, like stretch a lot, they won't be doing that no more because they don't exercise no more...

*Social component.* Discussions with overweight girls yielded answers similar to the normal weight group in that life without physical activity would be "boring." However, one participant also described the consequence from an emotional angle stating:

> ...when you are active, you are nicer. Maybe they won't be as nice...

Both groups suggested the consequences of discontinuing activity would be the negative impact on health, i.e., gaining weight, getting sick, or losing health. It is interesting, however, that overweight respondents more frequently spoke of what would happen to others rather than themselves if they stopped being active. The opposite was true for the normal weight group in that they more often referred to what would happen to themselves if they stopped being physically active.

### *Changes Participants Would Make in Current Fitness Level*

After participants discussed the negative consequences of discontinuing physical activity, they were asked to shift their thinking back to their current fitness level and what they would change. Specifically, they were asked: Is there anything you would change

about your current fitness level? If they responded "yes," they were then asked to discuss what they would change and why they would change it. If they responded "no," they were asked to explain the reasons why they would not change anything. Results from both groups revealed two higher order themes of increase sport involvement or ability and improve physical self (See Tables 8 and 9).

Table 8

*Changes Participants would make in Current Fitness Level-Normal Weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 5 | Be on a team | Increase Sport Involvement or Ability |
| 2 | Run longer/increase activity | |
| 1 | Improve skill | |
| 1 | Lose weight | Improve Physical Self |
| 1 | Wouldn't change/maintain activity level | |

Table 9

*Changes Participants would make in Current Fitness level-Overweight Group*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 2 | Increase activity for energy & CV health | Improve Physical Self |
| 2 | Lose weight | |
| 1 | Increase stomach muscles | |
| 1 | Try harder at physical activity | Increase Sport Involvement or Ability |
| 1 | Do sports to get into better shape | |

*Normal Weight Group*

*Increase sport involvement or ability.* Many of the normal weight girls discussed changes in terms of opportunity rather than physical modifications. Five stated they would be on a sports team for various reasons. One girl would join sports because she likes them:

> ...cause I just love running around and because I grew up with soccer. My dad and older brothers like it so I guess I was just born in that environment...

Another would want to join a team for fun:

> ...I could like enter the swim team and I could probably have more fun going to the pool and those places...

One girl took a futuristic approach with her answer about joining stating, "If we did more stuff in gym, cause next year in 7th grade, I'm doing sports for all four seasons." Normal weight participants also cited improving skill and being able to run longer/increase activity as things they would change about their current fitness level. One wanted to improve skill to not be afraid of activity:

> ... I guess I would want to be a better swimmer. I can't float. I guess sometimes I get scared in the water, and then I conquer my fears...

Two others responded they "would get more physically active" and "probably run longer than I do, cause I can only run for like ten minutes..."

*Overweight Group*

*Increase sport involvement or ability.* Overweight girls said they would like to increase sport involvement or ability in two ways. One participant suggested she would change her current fitness level by doing sports to get in better shape:

> ...stretch a lot and do sports because I do sports, but on weekends and with my friends, not usually... I want to get in better shape...

Another girl approached change from an effort perspective saying:

> ...I'd like to change the way I do stuff, not just give up and say I can't do it, but actually do it. Like the 5k, I don't really want to do that, or the mile run, I don't really want to do that, but I think I should try...so I can be fit.

*Improve physical self.* The overweight group revealed they would change their current fitness level by improving their physical self in three ways; increasing activity for energy and cardiovascular health, improving stomach muscles, and losing weight. One girl stated:

> ...like exercise more, I like to be active, I like to ride bikes or jump rope or dance...I would be helping more instead of staying in bed... [and] be more healthy and stuff...

A second girl talked about exercising to get faster and not get out of breath:

> ...I wish I could run faster...because I like to run, but I have a hard time running because I can never breathe...

Two participants discussed they would change their fitness level by losing weight. One stated, "I would lose weight so I would look good." The other said she would, "probably want to get skinnier." In addition, one girl mentioned she would increase muscle strength to improve her self-image:

> ...I think I should work out a little bit more. Like I think I should do a lot more sit-ups because like for my stomach...cause I want to get some abs...so then I feel good and stuff like that...

The two higher order themes emerged in reverse order as the result of the preponderance of evidence. Overweight girls most often cited improving physical self as what they would change, while normal weight girls said they would modify their current fitness level by playing sports. The fact that overweight youth displayed a desire to

improve their fitness level raises the question of opportunity, motivation, and commitment level to do so.

### *Perceptions of the Value of Physical Fitness*

In an attempt to explore motivation towards physical fitness, participants were asked the following questions: Do you think it is important to be physically fit? Why or why not? All girls from both groups thought being physically fit was important, most frequently citing reasons related to health. However, the higher order themes which emerged differed slightly. Results for normal weight subjects revealed four higher themes: health-related, weight-related, body image, and constructive use of time. In addition to health- and weight-related themes, an ability-related theme emerged for the overweight group as well (See Tables 10 and 11).

Table 10

*Perceptions of the Value of Fitness-Normal Weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 7 | To be in good health or good shape | Health-related |
| 2 | Decrease risk of sickness | |
| 2 | Weight control for cardiovascular health | Weight-related |
| 1 | Avoid being overweight | |
| 2 | Have a body you can be happy with | Body image |
| 1 | To be strong | |
| 2 | Don't waste time sitting around | Constructive use of time |

Table 11

*Perceptions of the Value of Fitness-Overweight Group*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 1 | To stay healthy or in good shape | Health-related |
| 2 | Decrease risk of sickness | |
| 1 | Weight control for cardiovascular health | Weight-related |
| 2 | Weight control related to daily living | Improve Physical Self |
| 1 | Competitive ability/skill improvement | Ability-related |

*Normal Weight Group*

*Health-related.* Discussions with normal weight respondents revealed they perceived fitness to be valuable as a means to be in good health or good shape. Participants expressed this in the following ways:

> ...Because... you can have good health...
> ...You would be healthy...
> ...it makes you stay healthy...

One girl perceived being physically fit as linked with a longer lifespan:

> ...if you don't stay physical, and you just eat a bunch of junk food, I guess you will live a little less, although scientists say that's not one of the true facts that people live longer...I guess you will have a healthier life and you will be more fit when you grow up and you can be more active...

Two girls also suggested the value of physical fitness is directly related to a decrease in the risk of sickness. One further stated, "you wouldn't get sick a lot," and the other said, "you don't get sick as much."

*Weight-related.* Normal weight participants also concluded there was a link between weight and the value of being physically fit. Two girls perceived fitness as a valuable means of improving cardiovascular health:

> ...if you are overweight you have a greater risk of getting the heart attack or something else...your heart stopping I guess...

> ...you could be a little fat and you might get sick in your heart...I've seen a lot of people die because they are really fat and their heart just stopped beating...

A third youth stated the value of being physically fit was simply so, "you wouldn't get fat."

*Body image.* Interviews with normal weight participants about the value of being physically fit further revealed a theme related to body image. One girl suggested the value of being fit was so you could have the body you want and could be happy with it:

> ...because a situation may come up where you really have to work hard and you don't have the type of body and you really want it, and you start exercising... maybe you meet someone or something happens that you really want to do and you can't because you are not physically fit...

In addition, another perceived physical fitness as a way to avoid being overweight, stating, "you wouldn't get fat."

*Constructive use of time.* Two normal weight girls further suggested that physical fitness was valuable because it is a good use of time:

> ...you don't just sit there doing nothing...

> ...and it's better to do something, instead of being home everyday, watching TV, doing the same old stuff...

*Overweight Group*

*Health-related.* Discussions with overweight participants yielded two lower order themes linking the value of fitness to health-related outcomes including to stay healthy or

in good shape and to decrease risk of sickness. These lower order themes mirrored those of the normal weight group; however, it is important to note that overweight girls spoke of hypo-kinetic ailments when talking about sickness:

> ...because if you are not physically fit, you get diseases, like when you grow up, like diabetes and different stuff...

> ...you can get diabetes and stuff like that and there is a lot of stuff you can get if you are not healthy and you don't stay physically fit...

*Weight control.* Two overweight youths perceived the value of physical fitness to be weight control related to cardiovascular health. One girl stated, "if you are not really physically fit or overweight, you can die from all that fat that is around your heart..." Another suggested the value of fitness depended on a person's need for weight loss in the following way:

> ...for some people...it depends on their weight and like when they are real big, I think they should lose weight and be more healthy...I don't know, I think with all that fat in their body, it may stop their heart...

In addition, one other girl thought weight control was important for daily living activities:

> ...It's important to be physically fit because if you aren't, you might be really overweight and you can't get out of bed and you can't run or do important stuff...

*Ability-related.* The third higher order theme that emerged from discussions with overweight subjects linked the value of physical fitness to improving and demonstrating ability:

> ...you could race with your friend and all this stuff, cause last year I couldn't run so fast and I couldn't beat my friend, but this year I could beat her and all this stuff, cause she said she don't have it good no more...I think it's important because you can do lots of stuff. Like, people do cheerleading and all that stuff. They can do splits when other people can't.

Participants in both groups perceived fitness as valuable. Normal weight girls most often related fitness with being in shape or in good health. On the other hand, overweight girls suggested the main value of fitness was weight control related to a healthy heart and daily activity.

### *Sources of Knowledge about Physical Fitness*

An important piece of this study was to examine the impact of environmental influences on participants' perceptions of physical fitness. One step in exploring this was to inquire about their sources of knowledge. Specifically, subjects were asked the following questions: (a) Where have you learned about fitness? Where did you get all this knowledge from?; (b) If a friend wanted to know about fitness, whom could he or she ask? How could your friend find out more? Results revealed both internal and external sources for the normal weight group, but only external sources for overweight participants (see Tables 12 and 13).

Table12

*Sources of Knowledge about Fitness-Normal Weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 5 | PE teacher/class/school | External Sources |
| 4 | Parents/family | |
| 2 | Friends | |
| 1 | Coach | |
| 1 | Television | |
| 2 | Playing sports/experience | Internal Sources |
| 1 | Own experience | |

Table 13

*Sources of Knowledge about Fitness-Overweight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 6 | PE class/PE teacher/school | External sources |
| 3 | Parents/family/relatives | |
| 2 | Television | |

*Normal Weight Group*

*External sources.* Normal weight participants revealed they learned about fitness from five external sources: their physical education class or physical education teachers, their parents and family, their friends, their coach, and television. Of the five girls who cited physical education or school, two specifically referred to current or former teachers:

> ...I think that the best is Mr. N. last year and Ms. F. They are like both really good teachers and they help you stay in shape...
>
> ...my gym teacher...

Other responses referred to teachers or class in general. One girl responded she learned from, "school, some things we do in gym," and another suggested a friend could, "ask a gym teacher" if they wanted to know more about fitness. In addition, one stated that gym class taught the importance of fitness:

> ...like gym teachers, gym class and how they are teaching the importance of physical fitness...

Another common source of information among the normal weight group was parents and family. One subject spoke of how her aunt influenced her by being active herself:

> ...my aunt...cause when she was in high school she did basketball an softball and all this stuff and she had me go to her games with her. She'll play softball with me outside and get me into it and tell me I need to join sports...

Other girls simply stated who they learned from: " I've learned from my cousins," and "my sister and my family," while another suggested a friend could "maybe go ask their parents" if they needed to know more about fitness.

Friends emerged as the third external source for normal weight participants. When asked where they learned about fitness, one girl responded, "my friends told me about it," and another stated how she learned from her friends after a move:

> ...when I got here from Texas, they taught me how to play and stuff, and that's when I started to like playing sports...

Additional sources of knowledge also emerged. One participant thought if a friend wanted to learn more about fitness they could "ask a coach." Another stated that she gained knowledge about fitness from, "basically just TV shows...like reality shows I guess."

*Internal sources.* Discussions with normal weight youths suggested sources of knowledge about physical fitness were having or getting experiences playing sports or personal experiences in general. When asked where she learned about fitness, one girl concluded knowledge came from just playing:

> ...most of the time when I was playing outside, and when I was smaller I was on a soccer team and I liked it a lot and I just kept playing...

Another girl suggested that if a friend wanted to learn about fitness she should," join a sport."

Two other subjects referred to personal experience in a slightly different way. One spoke of learning the relationship between exercise and weight loss in her own life:

> ...or my own experiences since like I eat a lot, I go up in weight, and I don't eat, I lose weight. And I've learned to keep exercising; running everyday...and you just learn things by yourself...

*Overweight Group*

Results from discussions with overweight participants revealed three lower order themes similar to that of the normal weight subjects. It is important to note, however, that no internal sources of knowledge emerged in this group, nor was there any mention of learning from friends. Overall, fewer sources of knowledge were revealed by the overweight youths.

*External sources.* Responses revealed overweight girls learned about fitness from physical education classes, teachers, and fitness teachers, parents or family, and television. Of the six participants who cited their physical education class or teacher, five spoke of their own experiences. For example, two girls responded, "school and gym class," and another said, "my physical wellness teacher." A third referred to her physical education teacher and fitness teacher and stated she learned about fitness through them because, "they talk about it a lot." One girl suggested she learned from her physical education teacher because, "I think she [Mrs. F.] is the nicest teacher I've had in gym and she explains it better than my other gym teachers did, and she's really fun too." In addition, another participant felt she learned because her teachers told her to do stuff and she wanted to compete with others in her class:

> ..the teachers keep telling us to do that stuff and I do it because I want to do the same as everybody else, or get better than somebody else...

When asked who a friend could approach to learn more about fitness, this same participant replied, "I would tell them to go to a gym teacher or to take gymnastics and all the stuff."

Discussions with overweight participants also revealed that parents and family were sources of knowledge about physical fitness. Two girls spoke of learning by participating with an uncle:

> ...I used to go to my uncle's house, we would go up in the gym and run and stuff...
>
> ...My uncle because he does karate. He taught my brother and I used to watch them a lot...

Another girl suggested if a friend wanted to learn more about fitness, they could go to "their parents or their brothers, sisters."

A third external theme which emerged was learning from watching television. One girl simply stated she learned about fitness, "when I watch TV." Another cited TV as a source of knowledge because she learned that, "exercise is good and it can help people."

Overall, normal weight participants revealed more sources of knowledge about physical fitness than overweight participants. Similar external sources were mentioned by both groups, with PE teachers and school being the primary sources. In contrast to the overweight girls, normal weight girls suggested they also learned about fitness from their own experiences.

### *Perceptions of Physical Fitness in Family Members*

To further examine perceptions of fitness, participants were asked to discuss who they thought was physically fit in their home. Specifically they were asked the following questions: (a) Who in your family is most physically fit? How do you know? What types of activities do you see them do? Are there activities you do with them?; (b) Who do you

think is second most fit in your family? How do you know? What types of activities do you see them do? Are there activities you do with them? Results from these discussions of participants' perceptions were broken down several ways. First, data were compiled showing who the participants thought was most, and second most fit, in their family (see Table 14).

Table 14

*Frequency of Perceptions of Who is Most Fit in Family*

| | *Most Fit* | | *Second Most Fit* | | *Combined* | |
|---|---|---|---|---|---|---|
| Person | N | O | N | O | N | O |
| Dad | 2 | 4 | 1 | 0 | 3 | 4 |
| Sister | 1 | 2 | 3 | 1 | 4 | 3 |
| Mom | 2 | 0 | 1 | 2 | 3 | 2 |
| Brother | 1 | 0 | 1 | 3 | 2 | 3 |
| Self | 1 | 0 | 1 | 1 | 2 | 1 |
| Cousin | 1 | 0 | 1 | 0 | 2 | 0 |
| Uncle | 0 | 1 | 0 | 0 | 0 | 1 |
| No One | 0 | 1 | 0 | 0 | 0 | 1 |

*(N=normal weight; O=overweight)*

When normal and overweight girls were asked who was the most or second most fit in their families, responses yielded varying results. However, dads and sisters were the most common responses in both groups. For normal weight respondents, after answers to both questions were combined, four thought their sister was most fit and three participants thought either dad or mom was most fit. Brothers and cousins were

mentioned by two girls, and two other subjects viewed themselves as most fit over their other family members.

For overweight participants, results showed that dad was perceived as most fit by four participants; three girls thought either their sister or brother was most fit; two participants mentioned mom as most fit; and one named herself as most fit. Two responses emerged in this group that did not show up with the normal weight group. One girl mentioned an uncle as being most fit in their family and another girl stated that no one in her family was fit.

Data from these discussions were further organized according to the activities participants did with their family members. Both groups were engaged in more sporting activities than leisure activities. However, it is important to note that the normal weight group cited being more active with fit family members than the overweight group (see Table 15 on next page).

Table 15

*Activities Participants do with Family Members they Perceive as Fit*

| *Activity* | *Normal Weight* | *Overweight* |
|---|---|---|
| | N | N |
| Sports | | |
| Soccer | 5 | 4 |
| Volleyball | 2 | 4 |
| Basketball | 3 | 1 |
| Tennis | 2 | 0 |
| Baseball | 1 | 1 |
| Football | 1 | 0 |
| Leisure Activities | | |
| Running | 2 | 3 |
| Walking | 1 | 2 |
| Ride bike | 2 | 0 |
| Outdoor playing | 2 | 1 |
| Skateboard | 1 | 0 |
| Rollerblade | 1 | 0 |

### *Perceptions of Why a Family Member Is Most Fit*

Results were further organized into lower and higher order themes reflecting why participants thought these family members were fit. To determine participants' perceptions of who was most fit in their family, reasons for their responses were explored. In other words, why did participants think people were fit or how did they

know? Results revealed sports-related, work-related, and exercise-related themes for normal weight subjects and sport and exercise-related themes for the overweight group (See Tables 16 and 17).

Table 16

*Perceptions of Why a Family Member is Most Fit-Normal Weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 3 | Participates in sports | Sports-related |
| 2 | Because [I] see him active in sports | |
| 1 | Plays sports/teaches me | |
| 1 | Lifts weights/plays soccer | |
| 1 | Likes to run/is good at it | |
| 1 | Full of energy and plays sports | |
| 2 | Because exercises/has arm strength | Exercise-related |
| 1 | Because she's active | |
| 1 | Because she does manual labor | Work-related |
| 1 | Because she's not overweight | Not overweight |

Table 17

*Perceptions of Why Family Member is Most Fit-Overweight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 6 | Exercises and is active | Exercise-related |
| 2 | Likes to dance | |
| 2 | Lifts weights/has cardiovascular endurance | |
| 2 | Because plays sports | Sports-related |
| 1 | Because is rough at sports | |
| 1 | Too tired to be fit | No one |

*Normal Weight Group*

*Sports-related.* Discussions with normal weight participants suggested they perceived family members as being fit for a variety of sports-related reasons. Three youths linked their sister's fitness to sports participation. For example, one girl thought her sister was in shape because, "she used to be in track." Another stated her sister "runs a lot and when she runs a mile she always has a good time." The third girl thought her sister was fit because they played together:

> ...she plays with me, basketball, and she plays soccer and I think when she grows up she will be in really good shape...

Another reason participants gave for thinking a family member was fit was because they saw them being active in sports. Two girls spoke of their fathers in the following ways:

> ...he likes to do a lot of sports. He walks to the park and comes back. He likes to play sports with us. He just likes doing all kinds of stuff.

> ...I'd say my Dad is kind of chubby, but he plays soccer a lot and he doesn't want to play anymore because he hurts himself a lot...Sometimes he rides bikes. He goes on our street and goes to other streets and comes back an hour later. So he does a little bit of everything...

Other participants perceived family members as fit for a variety of sports-related reasons. One girl said she thought her sister was fit because, "when she was little, she played a lot of sports and she said she was really good and would teach me how to play." However, she went on to say that [she didn't see her do that much now because], "she has a baby right now so she can't really jump and run that fast." Another girl described her sister as fit because "she likes running... she's always hyper and stuff like that." Another described her brother as fit because, "he is full of energy, and he always wants to jump around and play sports and stuff." Finally, one girl perceived her brother as fit because he lifts weights and is good at sports:

> ... he knows certain stuff that I don't about soccer, like dribbling and stuff like that. And he teaches me so I can do good in gym.

*Exercise-related.* A second higher order theme which emerged with normal weight girls linked perceptions of family members being physically fit with exercise. Two participants stated they perceived family members as fit because of strength. For example, one girl said her dad was fit because, "when we play on the monkey bars, he's better with arm strength; I have barely any arm strength." Another girl described her cousin as fit in the following way:

> ...he likes the gym a lot, he doesn't like do sports or nothing, but he does all the exercises...like pull-ups, like every time we are in the living room, he comes out and is like, 'watch me do this."...

Another girl viewed her mom as fit because, "she likes to ride bikes and all that with my dad and she lost a lot of weight, so she looks okay right now." Lastly, one

participant explained she perceived herself and her brother as more fit than her sister and little brother because, "me and my brother are most of the time playing outside and my sister and little brother are inside watching TV and playing video games."

*Work-related.* The third theme which emerged from discussions with normal weight respondents related fitness to work. One participant described her mom as physically fit for the following reason:

> ...she works in a field and is always carrying around things that are really heavy, and like she kind of runs a little bit...

*Overweight Group*

*Exercise-related.* Discussions with overweight participants yielded a dominant theme relating to being physically fit because of exercise. The most common explanation of why participants thought certain family members were fit was because they exercised and were active. The following are quotes describing these family members;

> ... [my uncle] he likes to work out and he does a lot of exercises... he like runs everyday, or run-walk, he lifts weights, and he drinks this drink, I don't know what it is...

> ... [my dad] Every night, every morning he does like pushups, sit-ups, crunches, he likes to walk and run a lot. He used to weigh like three hundred pounds and his feet were getting cuts on the bottom, so he got on a diet...and he started exercising and running every single day. He won't miss a day without exercising...

> ... [my mom] because she helped my dad in that diet. So they went walking together and running. My Dad kind of liked it and he started going everyday, and my mom went with him every other day...

> ... [my sister] she says she does a lot of sit ups and push ups and runs a lot... Like I go walking with her to the store, and running and all that stuff...

> ...[my dad] because he gets out there more...

One girl thought her family member was fit because, "he [brother] goes to the store on his bike, he walks a lot and he plays soccer a lot, three times a week I think." Another viewed her mom as fit because, "she mostly spends her time walking in the park, and her dad because he exercises a lot." Another participant suggested her brothers were fit because they were weight lifters. Specifically, she described her middle brother as the most fit:

> ...he can run a lot and a long time ago he used to do weight lifting. He doesn't really look buff or anything, he looks like a little wimp, but he's' really strong...

A final exercise-related theme linked being fit with dancing. One girl thought her sister was fit because, "she goes for two hours to dance and all that stuff." A second participant thought her dad was most fit, but ranked her self second:

> ...I always feel that my dad is the most and then me and my little sister, because like we will play like dancing tag. We just put on some dance tunes with our friends

*Sports-related.* Three overweight participants described family members as being fit due to involvement in sports. One stated her dad was fit because he "plays basketball," and another described her brother as fit because, "he likes to play basketball." One girl perceived her brother as fit because he was rough at sports:

> ... [my middle brother] because he's in football and they have to [be rough]. I've seen the video and they play pretty rough.

In addition, discussions with overweight youths yielded one response that no one in the family was most fit. Referring to her mom, one subject stated, "I don't think my mom is [fit] because she works so much that she gets really tired and she just goes to bed."

Both groups of participants most often perceived their father and/or sister as the most fit family members. Although normal weight youth were more active overall, both groups reported they most frequently participated in sports such as soccer, basketball, and volleyball, with fit family members. Results also demonstrated differences in reasons why participants perceived these family members to be fit. In contrast to the overweight girls, normal weight girls thought their family members were fit because they were involved in sports-related activities. Despite reporting frequent sports involvement with fit family members, overweight girls most often perceived fitness to be the result of exercise-related activities versus sport activities.

### *Perceived Barriers to Physical Fitness*

To determine participants' perceptions of barriers to being physically fit they were asked: Has anyone ever discouraged you from being physically fit? Who? If subjects responded yes, they were asked the following sub questions; How did they discourage you? What are some reasons you felt discouraged? If participants responded there was not anyone who had discouraged them, they were asked the following questions: Do you feel anything has ever discouraged you from being physically active? What are some reasons you felt discouraged by this? Results revealed two higher order themes for normal and overweight groups: external sources and internal sources (see Tables 18 and 19 on next page).

Table 18

*Perceived Barriers to Fitness-Normal Weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 1 | Negative comments from peers | External sources |
| 2 | Family commitments/financial priorities | |
| 2 | Watching television | |
| 1 | Distractions from boys | |
| 1 | Distractions from friends | |
| 1 | Injury | Internal sources |

Table 19

*Perceived Barriers to Fitness-Overweight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 1 | Negative comments from peers | External sources |
| 1 | Chores/too busy | |
| 1 | Watching television | |
| 1 | Feeling depressed | Internal sources |

*Normal Weight Group*

*External sources.* When asked to discuss if anyone or anything had ever discouraged participants from being physically fit, normal weight responses revealed a variety of external barriers. Two girls spoke of how their same sex peers discouraged them by putting them down or being mean:

> ...a girl in school...she goes to everyone and she thinks she is like Miss Perfect and skinny and stuff, and she goes up to everyone and goes like, 'you are too fat,' and stuff. And like, '[you] are weak'... [it made me feel] that I wasn't working hard enough...

> ...some girls...because I used to be a little bit overweight in the beginning of the year and they used to always make fun of me and stuff...my Mom told me not to be like that because I used to start to cry, but then I got more active in school and started to lose...it's like they told me I couldn't do anything and they told me I was lazy and I got all sad...

Two normal weight girls also spoke of how family travel and financial commitments got in the way of physical fitness. One stated that when her family travels, "we don't usually run a lot or do anything. We travel a lot - almost every year. We go to my Aunt who lives in Florida and I don't run a lot over there. Yeah, sometimes we are too busy or we have a family reunion or something." (sic). The other girl explained how she had wanted to play soccer, but could not afford to buy the shoes because her family needed the money for something else:

> ...like my brother is graduating this year and my Mom wants to throw him a big party, or celebration. And I think it was two months ago they showed us these soccer shoes and it was forty dollars and stuff, but she was trying to save for his graduation...

Another external barrier which emerged was watching television. One participant stated that, "every time I go home I watch TV a lot." Another described watching TV as a barrier the following way:

> ...when it is on and clicked to your favorite show and you were about to go outside and then you stay and watch it."

A final external barrier mentioned by participants was being distracted by other people. For example, one girl explained how boys interfered with being physically fit:

> ...it's like the boys here at school...Like if you like them, then that's all you can think about and then after school what you are gong to do and it just distracts you from your work and gym because you don't want to do nothing because you just want to sit there and think about them...

This same girl went on to say her friends were also a distraction because, "I just go outside and me and my friend just sit in her room all day and talk. We really don't do nothing." (sic).

*Internal sources.* Discussion about barriers to fitness further yielded one internal source, i.e., injury. One participant spoke of how injury kept her from being fit:

...once I broke my hand and I couldn't play basketball...

*Overweight Group*

*External sources.* Discussions with overweight participants revealed three external barriers to fitness, including negative comments from peers, watching TV, and doing chores or too busy. It is interesting to note that this group expressed fewer external barriers than the normal weight youths. Two girls responded they perceived comments from peers as a barrier to being physically fit. One stated, "when people call me names, it makes me feel bad." Another remembered specific situations where she felt discouraged:

> ... last year a boy told me that you are too fat and all that stuff and I felt so bad. He kept on telling me and I told a teacher, then he got yelled at and all that stuff...he was like why did you tell on me? Because I don't like you telling me that stuff-that's what I said to him....like he made me cry...[and] this year someone told me, like I was going to sit , but there wasn't space, but she's like...you don't fit in here, you are too fat, is what she said...

Another overweight respondent suggested her daily schedule was a barrier to fitness stating, "I think that my day is too busy, I have to go home and do my chores and clean my room and stuff."

*Internal sources.* Discussions with overweight participants resulted in one internal barrier to being physically fit. One participant openly spoke of how feeling depressed had seriously impacted her desire to be fit:

> ...sometimes I just feel like, I don't know...like I don't want to live anymore, so I don't want to be physical and stuff...yeah I don't want to do anything...just sit until something happens...

As a safety measure, this response was reported to the participating teacher immediately following the interview.

Overall, normal weight subjects perceived a greater number of barriers than the overweight group. Negative comments from peers and watching television were shared by both groups, however, normal weight girls further cited family, friends, and finances as external barriers. Internal barriers also varied between the groups. Overweight girls took a more emotional approach citing depression as a barrier, while the normal weight group referred to physical injury as an internal barrier.

### *Perceived Sources of Encouragement*

To determine whether participants had been encouraged to be physically fit and how they had been encouraged, they were asked the following questions: Has anyone ever encouraged you to be physically fit? Who? How did they encourage you? What are some reasons you felt encouraged? Do you feel anything else has encouraged you to be physically fit? What are some reasons you felt encouraged? Results from normal and overweight groups revealed two higher order themes of external sources and internal sources of encouragement (See Tables 20 and 21 on next page).

Table 20

*Perceived Sources of Encouragement-Normal Weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 5 | Family members through negative and positive verbal encouragement | External encouragement |
| 3 | Family members participate with | |
| 3 | Verbal encouragement from friends | |
| 2 | Verbal encouragement from P.E. teacher | |
| 2 | Enjoy physical activity | Internal motivation |
| 1 | Motivation to lose weight | |

Table 21

*Perceived Sources of Encouragement-Overweight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 5 | Verbal encouragement from family | External Encouragement |
| 1 | Babysitter encouragement | |
| 1 | Vicariously through TV | |
| 1 | Chores as a motivator | Internal Motivation |

*Normal Weight Group*

*External encouragement.* Normal weight participants cited more sources of encouragement over all than overweight youths. Discussions with normal weight girls revealed they received encouragement from a variety of external sources. It is important to note that most participants cited verbal feedback in some form as the main source of encouragement. Several of the girls stated they felt encouraged by both positive and

negative feedback from family members. One girl said that her parents encouraged her by, "[telling me] to eat healthy, just telling me to join sports. So I can have fun and at the same time, get fit and stuff." Another explained how her grandma, mom, and dad encouraged her in the following ways:

> ...they always tell me I am losing weight and that I should just keep it up and get into cheerleading and the dance team and everything. So I feel like I can do it, so sometimes I do try out...like sometimes they say go out and run...so I do and get into activities and stuff...

One participant spoke of being encouraged by negative feedback from her Aunt:

> ...because she tells me that people like to be lazy, but now I'm starting to do stuff... she told me last week that if I keep being lazy I won't be able to do nothing... I told her I was going to sign up for sports next year and my aunt tells me, if I keep this attitude up and keep watching TV when you go home, [I] won't be doing nothing next year because [I'll] quit right away if [I] don't keep doing [my]work. So, she was like, do you want to go to the basketball court and do something, and I was like, ya. So she takes me and helps me a lot...she helps me with my free throws and everything...

One other girl expressed that she felt verbally encouraged by her parents when she played soccer because, "they would play coach." Family members were also described as encouraging because they participated in activities with or taught activities to participants. One girl stated she was encouraged by her brother because, "he tells me sometimes when we are playing soccer, if I almost got something he tells me another way to do it to get it right." Another participant mentioned her sister, who runs the mile for her school, encourages her because, "she runs with me around our house a certain amount of times." A third participant explained that she felt encouraged by her uncle and cousins because when they played soccer, "they told me to play my best, it doesn't matter if I win or lose." Another example of external encouragement for normal weight girls was verbal encouragement from friends. For example, two girls described their feelings this way:

> ...we were on the soccer team and she told me that I'm the best in it...and I'm like, "do you think I'm fat?" and she was like, No, you are just perfect...

> ...when we were playing basketball and I made a shot...they were all cheering. When we played volleyball and I made a serve...they were all cheering...that made me feel kind of happy inside...

Other students spoke about being encouraged to be fit by their physical education teacher. The following is an example:

> ... [my PE teacher] always tells me you are a good shooter and you should try out for basketball next year...and, come on, you know you can do this, you've only got three minutes left... She just encourages me a lot.

*Internal motivation.* Normal weight participants suggested there were two internal sources of encouragement including motivation to lose weight and enjoyment of physical activity. One girl described her motivation to lose weight in the following way:

> ...when they [Doctors] told me I was a little overweight, I was just trying not to feel like that [discouraged]. I was just trying to lose weight and encourage myself...

Another explained that pressure to be thin did not change her motivation at all:

> ...I guess sometimes in school you kind of feel the pressure to be a certain amount of weight, like to be skinny, but that hasn't really bothered me...

Two other girls stated their enjoyment of physical activity encouraged them to be fit. One stated she encouraged herself, "because I want to, I just like playing." A second participant said, "I just like learning the routines and all that and you actually perform."

Overweight group

*External encouragement.* Discussions with overweight respondents resulted in noticeably fewer sources of external encouragement. Several participants did perceive their family members as encouraging because they received verbal feedback from them. For example, one girl felt her whole family was supportive because, "they tell me to go

running or ride bikes or dance with my friends or something like that." Another girl also suggested her parents encouraged her to do things with friends by saying, "why don't you go with your friends and have fun and play some sports." One participant spoke of how her mom encouraged her while watching TV:

> ...when I am watching some sports, she tells me I could probably play those sports if I tried my best and exercise...

One other girl described her parents as encouraging her to put her liking of sports to use:

> ... [Parents] are like maybe you could be a coach for some gym or something, because I like to exercise and play games and stuff...and my Mom and Dad think I should be a coach for soccer or be a gym teacher in the schools...

In addition to family members, one participant said she felt encouraged by her babysitter because, "she's always telling me...you are really good at exercising, just exercise and do this." One other overweight girl suggested even though her health was a barrier, she was encouraged by watching television in the following way:

> ...well, sometimes I see people on TV playing games or something, and for that you have to be healthy, so sometimes I'll try to. Like...soccer, I like to play that a lot, but in my case I'm not healthy enough to play...

*Internal motivation.* One internal source of encouragement emerged through discussions with overweight girls. One participant described how work motivated her saying, "sometimes chores help too because like sometimes when I'm feeling lazy or something, you can start cleaning or something."

Evidence revealed more sources of encouragement overall for normal weight participants. While both groups stated verbal encouragement from family as an external source, normal weight subjects further reported encouragement from friends, teachers, and participation in activities from family members. In contrast to overweight girls,

normal weight girls also perceived internal encouragement in that they enjoyed physical activity and saw weight loss as a motivator.

*Perceptions of Potential Barriers to Fitness in the Future*

In addition to examining if anyone or anything discouraged participants from being physically fit, perceptions of potential barriers to participation in future physical activities were examined. Participants were asked the following set of questions: What are some reasons you or someone you know might stop being physically fit? How or why do you think this would stop you or them? Can you think of anything that might prevent, or keep you, from being physically fit? How or why do you think this would prevent you or someone you know from being fit? Results revealed three higher order themes for both groups including lack of support, stress-related distractions, and health concerns (See Tables 22 and 23).

Table 22

*Perceptions of Potential Barriers to Fitness in the Future-Normal Weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 1 | Job and kids | Stress-related Distractions |
| 2 | Family distractions | |
| 1 | School-related stress | |
| 1 | Change of environment | |
| 1 | Lack of family support | Lack of support |
| 1 | Negative peer comments | |
| 1 | No external expectation | |
| 2 | Tired/sick | Health Concerns |
| 1 | Lack of cardiovascular fitness | |

Table 23

*Perceptions of Potential Barriers to Fitness in the Future-Overweight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 1 | Feeling sad | Health Concerns |
| 1 | Complications with aging | |
| 1 | Health complications due to weight | |
| 1 | Lack of cardiovascular fitness | |
| 1 | Negative peer comments | Lack of support |
| 1 | Parent rules | |
| 1 | No physical education | |
| 1 | Work/school | Stress-Related Distractions |
| 1 | Child care | |

*Normal Group*

*Stress-related distractions.* For the normal weight participants, stress-related distractions came from a variety of sources. Two girls viewed working and balancing a job and kids as a possible deterrent from exercise. One stated, "If you have a job, balancing that and kids" would keep you from exercising. Another youth felt that when she grows up and has a job, she would be distracted because, "I would have more time at work and not be in sports". Another type of distraction described by participants was caused by family. One girl spoke in the following manner:

> ...because mom and dad are not together right now and it's distracting him...he's a little more upset...

Another girl stated though distracted, she would still be active:

> ...if something happens in my family, I would spend more time with them, but I would still be exercising...

One participant talked about the impact that moving and changing environments can have on fitness. She described her brother's situation in the following way:

> ...because he used to be a lot active, but then all he does practically is watch TV and some of the time he hangs around with his friends...[why?] probably because we changed states...probably a different environment...

A final stress-related distraction was school. When asked what would stop her from being fit, one girl simply responded," Like school stress, homework".

*Lack of support.* Three normal weight youths suggested that lack of support would be a deterrent from being physically fit. One girl thought a lack of family support would prevent someone from being fit in the following way:

> ...sometimes family doesn't encourage them and they just lose control and they just don't have control over themselves, so sometimes they get lots of stress when they feel like they can't get out of it...they probably don't have a good life at home. Maybe their parents don't encourage them, maybe they don't care about them...I'm not saying my parents don't care about me, but some people don't;...that's why they go to restaurants and their parents don't care.

Another respondent suggested negative comments from peers would keep one from being physically fit. Although such comments did not stop her, she did think they might stop others:

> ...I think what would keep them [from being fit] is if they kept getting people to tell them stuff ...or people kept saying to them that you can't do anything because you are too fat, you can't do something because you are too lazy or ugly or something like that...

A third girl viewed a lack of support as no one having expectations of her stating, "I guess if a lot of people didn't really look up to me, like they didn't see me as an example".

*Health concerns*. Participants suggested someone might be deterred from being physically fit because of concerns for their health. Two girls said someone might not be fit, "...if they are tired...they feel like they can't do something..." The other simply said she would stop being fit, "If I were to get sick". Another youth responded that a lack of cardiovascular fitness would be an inhibiting factor. She described her sister's situation in the following manner:

> ...Well, my sister doesn't want to, I told her let's go play outside, she says no I don't want to... I ask her why, she says because I get tired right away. I tell her I get tired too, and she says you get tired in a long time and I get tired like in five minutes...my mom said she [sister] is overweight and when she runs she gets tired and doesn't want to...

*Overweight Group*

*Health concerns*. Contrary to the normal weight group, health concerns were most mentioned as deterrents to fitness in the overweight group. Types of health concerns did vary, however, within the group. One girl referred to her grandmother's health changing with age saying, "...she's getting older and she's having a lot of surgeries and she's not able to do a lot of stuff." Another girl talked about how weight complicated her Aunt's health and made it difficult to follow doctor's orders in the following way:

> ...my Aunt is overweight and she's got problems like her knees are always hurting and she had back surgery and stuff like that... and the Doctor's said she has to keep a diet and be physical cause if not then she could get diabetes...

A third participant spoke of cardiovascular health as a concern for her little sister. She stated that she wanted her sister to lose weight to avoid a heart attack, but it was hard because her sister "gets tired real easy." A final concern in this theme concerned mental health. One subject suggested feeling sad would keep someone from being fit in the following way:

> ...they feel sad and don't know what to do...when you are sad you just don't want to do anything...

*Lack of support.* Three overweight participants thought a lack of support would stop or keep someone from being fit. One girl mentioned negative comments from peers might make someone stop physical activity:

> ...if someone said that you were overweight or called you really mean names to make you feel bad about yourself...some people just stop [activity]...

A second girl viewed rules established by parents as a possible deterrent to fitness stating, "if your parents don't like to go outside, and like you have to stay in with them and that kind of stuff..." Finally, another girl cited not attending physical education class as a reason someone would stop being fit saying, "he might skip the gym class... [or] not have PE."

Normal weight and overweight groups both suggested numerous potential barriers to fitness in the future; however, the higher order themes occurred in reverse order. Normal weight participants perceived the main barriers to be stress-related distractions such as jobs, family, and raising kids, while overweight participants most frequently cited health concerns, such as aging, being overweight, and cardiovascular health as potential barriers.

### *Physical Activities Engaged in by Participants*

To examine potential task constraints data were gathered in several ways. First, a portion of the demographic survey asked participants to look at a list of eight activities and rank their importance in two ways: 1) in order of priority indicating which activities they were currently involved; and 2) in order of priority regarding spending their time any way they wanted. A ranking of "1" meant the activity was of utmost importance and

a priority in their daily lives. A ranking of "8" meant the activity was not important and they spent little time at it. (See Tables 24 and 25 indicating results for normal and overweight participants).

The remaining portion of the demographic survey was a physical activity inventory which asked participants to rate their interest in a variety of sports and leisure activities. Table 26 shows mean score comparisons between the sub-groups of this study. Finally, participants were asked to further discuss what types of physical activities they already engaged in by answering the question: What kinds of active things do you like to do? If several were mentioned, they were then asked a series of follow up questions: Which activity do you like best? What makes it your favorite? What do you enjoy about it? What are some reasons you do this activity? Results are reported and discussed in Tables 27-30.

Table 24

*Rankings of Activity Priorities-Normal weight*

| *Current* | *If I Had a Choice* |
|---|---|
| 1. Playing with friends | 1. Playing with friends |
| 2. Household chores | 2. Participating in sports |
| 3. Homework/school activities | 3. Family time |
| 4. Participating in sports | 4. Taking care of young family |
| 5. Family time | 5. Homework/school activities |
| 6. Taking care of young family | 6. Watching television |
| 7. Watching television | 7. Household chores |
| 8. Playing computer games | 8. Playing computer games |

Table 25

*Rankings of Activity Priorities-Overweight*

| *Current* | *If I Had a Choice* |
|---|---|
| 1. Playing with friends | 1. Playing with friends |
| 2. Participating in sports | 2. Participating in sports |
| 3. Household chores | 3. Family time |
| 4. Homework/school activities | 4. Homework/school activities |
| 5. Family time | 5. Watching television |
| 6. Watching television | 6. Playing computer games |
| 7. Taking care of young family | 7. Household chores |
| 8. Playing computer games | 8. Taking care of young family |

Playing with friends was the highest priority in both categories by normal and overweight participants. Differences did emerge in current importance in that overweight girls ranked participation in sports second, while normal weight girls ranked playing sports fourth behind household chores and homework. Family time, taking care of young family, watching television, and playing on the computer received similar rankings from both groups.

Rankings did vary when respondents were given their choice in how to spend their time. Playing with friends remained number one, and playing sports was ranked second for both groups. Family time was of similar importance for the groups and household chores were a low priority for normal and overweight participants as well. The most noticeable differences were that television watching and computer games received

higher rankings from overweight girls and taking care of young family was ranked much higher by the normal weight group.

A second part of the demographic survey was a physical activity interest inventory. Participants were provided with a list of leisure and sport activities and asked to rate their level of interest in each activity on a four point scale: "1" indicating they would not be interested, "2" indicating they would be more interested, "3" very interested, and "4" indicating they would love this activity. Table 26 uses mean scores to display normal and overweight participant's interest areas and levels.

Table 26

*Mean Score Comparison for Physical Activity Interest Inventory*

| *Activity* | *Normal Weight* | | *Overweight* | |
|---|---|---|---|---|
| | *Mean* | *SD* | *Mean* | *SD* |
| Leisure Activities | | | | |
| Recess games/Jump Rope/Tag | 3.5 | .72 | 3.3 | .81 |
| Bicycling | 3.5 | .72 | 3.5 | .54 |
| Rollerblading | 3.5 | .75 | 3.3 | .75 |
| Swimming | 3.4 | 1.00 | 3.8 | .40 |
| Canoeing/Kayaking | 3.2 | 1.09 | 2.6 | .51 |
| Water skiing | 3.2 | .83 | 3.0 | .63 |
| Karate/Tae Kwon Do | 2.8 | 1.27 | 2.0 | 1.26 |
| Social Dance | 2.7 | 1.25 | 3.1 | 1.17 |
| Walking | 2.6 | .70 | 2.5 | .54 |
| Nature hiking/Backpacking | 2.6 | 1.12 | 2.5 | 1.5 |
| Bowling | 2.5 | 1.24 | 2.1 | 1.17 |
| Jogging | 2.4 | .72 | 2.1 | .75 |
| Snowboarding | 2.4 | 1.13 | 3.0 | 1.03 |
| Snow Skiing | 2.4 | 1.13 | 2.5 | .95 |

| | | | | |
|---|---|---|---|---|
| Aerobic Dance/exercise tapes | 2.4 | 1.13 | 3.3 | 1.21 |
| Weightlifting | 2.0 | .86 | 1.8 | .98 |
| Skateboarding | 2.0 | 1.22 | 1.8 | .98 |
| Sports Activities | | | | |
| Soccer | 3.2 | 1.12 | 3.1 | 1.17 |
| Tennis/Badminton/Racquetball | 3.2 | .83 | 2.3 | 1.03 |
| Basketball | 3.2 | 1.08 | 2.3 | 1.17 |
| Softball/baseball | 3.2 | 1.16 | 2.5 | 1.22 |
| Volleyball | 3.1 | 1.36 | 3.5 | .83 |
| Cheerleading/dance team | 3.0 | 1.20 | 3.4 | .89 |
| Gymnastics | 3.0 | 1.00 | 2.5 | 1.22 |
| Football | 2.5 | 1.33 | 2.1 | 1.17 |
| Ice/Floor Hockey | 2.3 | 1.12 | 2.5 | 1.22 |
| Golf | 1.7 | .83 | 1.2 | .44 |

Normal weight girls demonstrated higher interest in physical activities overall, particularly in sports activities, with the exception of soccer, cheerleading, and volleyball. Overweight girls showed they had more interest in swimming, aerobic and social dance, and snowboarding, but were less interested in leisure and sport activities than normal weight participants. Overall, the normal weight group demonstrated higher levels of interest in a greater variety of leisure and sports activities.

Participants were further asked to discuss what types of physical activities they engaged in. Table 27 displays responses from the question: What types of physical activities do you like to do?

Table 27

*Frequency of Physical Activities Engaged in by Participants*

| *Physical Activity* | *Normal Weight* | *Overweight* |
|---|---|---|
| | N | N |
| Sports (i.e., basketball, soccer, volleyball, etc.) | 7 | 2 |
| Leisure activities (i.e., ride bike, walk, rollerblade, exercise at park, etc.) | 2 | 2 |
| Miscellaneous activities (i.e., dance, activities with family, etc.) | 0 | 3 |

Both groups of participants reported they engaged in several activities; however, normal weight girls were involved in more activities overall than overweight girls. Specifically, normal weight youth participated more in sport activities such as basketball and soccer, in contrast to the overweight group who were more active in leisure activities reported being involved in dance and other miscellaneous family activities. These data show agreement, to some degree, with the results from the physical activity inventory (Table 26) in that normal weight girls stated they had more interest in sport activities. However, it may conflict with the results in Table 24 where overweight girls ranked playing sports as a priority in how they spend their time.

*Favorite physical activity.* Once respondents discussed what physical activities they liked to do, they were asked to select what activity they liked the best (see Table 28). Several common favorite activities emerged; however, team sports were more popular with normal weight girls, whereas dance and leisure activities were more popular with overweight youths.

Table 28

*Favorite Physical Activities*

| *Favorite Physical Activity* | *Normal Weight* | *Overweight* |
|---|---|---|
| | N | N |
| Basketball | 3 | 1 |
| Soccer | 3 | 2 |
| Dance | 1 | 2 |
| Swimming | 1 | 1 |
| Volleyball | 0 | 1 |
| Tag | 0 | 1 |
| Rollerblade | 0 | 1 |
| Running games | 1 | 0 |

*Perceptions of Why Activity is Favorite*

Participants were asked to discuss what made a selected activity their favorite. Responses yielded the same three higher order themes for both groups including social reasons, skill-related reasons, and enjoying the movement. Lower order themes, however, varied greatly (see Tables 29 and 30 on the next page).

Table 29

*Perceptions of Why Activity is Favorite - Normal weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 3 | Be with friends | Social Reasons |
| 1 | Because I'm good at it | Skill-Related Reasons |
| 1 | Can demonstrate skill | |
| 1 | Challenge of learning something | |
| 1 | Because fun to win | |
| 1 | Enjoy it | Enjoy the movement |

Table 30

*Perceptions of Why Activity is Favorite - Overweight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 3 | Be with friends | Social Reasons |
| 1 | Because it is movement | Enjoy the movement |
| 1 | Because body is free | |
| 1 | Because good at it | Skill-Related Reasons |

*Normal Weight Group*

*Social reasons.* Three participants stated that a particular activity was their favorite because they could be with their friends. One girl stated that she liked soccer because, "you get to have fun with your friends and stuff. And [you are] free to run around and stuff." Another said, "I like to run and play [basketball] with my friends at the same time." A third girl said she liked basketball and soccer because, "I'm with my

friends and I'm having fun, and you just get to throw that ball around and kick the ball around."

*Skill-related.* A second lower order theme that emerged was related to skill. One youth said she liked basketball because of, "dribbling the ball and shooting." A second respondent said soccer and swimming were her favorites for the following reasons:

> ...I guess it's easy for me to play and understand. And swimming is just fun and something I like to do...

A third skill-related reason had to do with the challenge of learning. One girl said dance was her favorite for the following reasons:

> ...so you actually learn routines and they actually challenge you to do things. So, you set a goal and you are like I'm going to get through this and you actually do and you learn your routine and you are actually fit at the end...

*Enjoy the movement.* Finally, three participants responded that an activity was their favorite because they enjoyed the movement. One girl said, "I just like the ones that have to do with running...I just like running." Another stated she did not have a favorite but, "I like to be active and move a lot." A third participant enjoyed soccer despite it being competitive because, "it's still fun just to win."

*Overweight Group*

*Social reasons.* Overweight participants gave social reasons as to why an activity was their favorite. One girl said she liked soccer because, "we played with our friends and we just run a lot." Another stated she liked to play tag because, "it's just the way it is when I'm with friends." A third participant spoke of rollerblading in the following manner:

> ...I don't know all my friends like to do it. There's not one friend that doesn't like to do it and I like it too."

*Enjoy the movement.* Three participants mentioned an activity was their favorite because they enjoyed the movement. Two stated they liked dancing because, "it has movement" and "because you like move a lot, and you like exercise at the same time." Another youth spoke about liking the freedom of swimming in the following way:

> ...because when you are in the water you just feel...free and you can do whatever...

*Skill-related.* The last higher order theme which emerged for overweight respondents was related to skill. One girl summed it up by stating basketball, volleyball, and soccer were her favorites because, "I'm good at those."

The most common reason normal and overweight participants cited an activity as their favorite was because they could be with friends. A difference in perceptions emerged, however, as many of the normal weight girls also gave skill-related reasons for liking a particular activity. Both groups also suggested an activity was their favorite because they enjoyed the movement; however, first order themes revealed that normal weight girls cited affective reasons, such as enjoyment and the fun of winning, whereas overweight girls' reasons were more physical in nature.

### *Perceptions of What Would Initiate Physical Fitness*

In order to determine what might get a non-physically fit person to become more physically fit, participants were asked one question: Can you think of anything that would get you or someone you know to become physically fit? Three higher order themes of environmental, individual, and task emerged from discussions (see Tables 31 and 32). It is interesting to note that normal weight subjects talked mostly about themselves and overweight subjects spoke of others.

Table 31

*Perceptions of What Might Initiate Fitness-Normal Weight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 5 | Encouragement from others | Environmental |
| 1 | Motivation from negative comments | |
| 1 | Have a pet to exercise with | |
| 1 | Budget | |
| 1 | Being a role model | Individual |
| 1 | Exercise to avoid illness | |
| 1 | Motivation to enhance appearance | |
| 1 | Find activity I like | Task |

Table 32

*Perceptions of What might Initiate Fitness - Overweight*

| *No. of Quotes* | *1st Order Themes* | *2nd Order Themes* |
|---|---|---|
| 3 | Encouragement from others | Environmental |
| 1 | Give no excuses | Individual |
| 1 | Positive attitude | |
| 1 | Sports for weight control | |
| 1 | Find activity I am good at | Task |

*Normal Weight*

*Environmental.* Encouragement and support from others was the dominant response for normal weight youths. Two girls suggested that having another person to be active with would be helpful in the following ways:

> ...maybe have a friend with you when you are doing those activities, so they would get you more encouraged to do it...

> ...if sometimes they need another person that they like... and they will be fit and they [you] won't...and they will encourage themselves or people encourage them and they just start working out...they actually lose weight...

Another participant, who liked it when people helped and supported her, said her physical education teacher (Mrs. F), "tells me I have to try out for basketball next year and that's what makes me want to join." Support from parents was another form of encouragement mentioned by this group. One girl stated the following:

> ...and your parents, they can push you and tell you I'm so proud of you, you are doing a very good job, and then they go see you...when I do shows in gymnastics, my mom goes with me and she's always telling me I'm doing very good and that pushes me because I think my mom is proud of me...

In addition, a fifth participant mentioned verbal encouragement saying, "I guess what encourages them is telling them they are doing okay, I guess that really encourages them." Another form of encouragement for normal weight subjects came from negative comments. One girl thought it could be motivating, "when people think you're not good enough...the people who are sometimes mad at you because they heard you talking about them." Another thought a pet would help someone get active stating, "I guess if you have a pet...you could run with it." A final environmental factor was budget. One girl, who thought it would help someone be fit if they knew how much it cost, stated "...you could give them some ideas of the prices, like you could get your own fees."

*Individual.* Three normal weight participants mentioned individual factors that might get someone to be fit. One girl spoke of herself as being a role model as a way to encourage someone, stating, "like if its soccer, for instance, and it was a girl, you would

look up to me." Another spoke of exercising to avoid becoming like a family member in the following manner:

> ...If you have a family member who was sick because they were overweight...I guess you would exercise...

A third participant suggested physical appearance might motivate an individual to be fit saying, "like some girls...they do physical activities jut to fit into their new outfits and stuff like that."

*Task.* One participant thought the key to becoming fit was finding an activity you liked and sticking with it. She described her friend's situation the following way:

> ...I have a friend in Texas...she hated sweating and stuff and then she likes more reading and being at the library most of the time. I think if she will try to play basketball or soccer, that she will be interested in it, she will definitely like it...

*Overweight Group*

*Environmental.* Three overweight girls cited encouragement from others as a way to get someone to be fit. One participant spoke of her own sources stating, "my brother, my uncle, and my other cousin." Two other subjects spoke about themselves as being the one to encourage someone else. One girl stated, "...you could do activities with them." The other said she would help someone get fit by saying, "I would tell them if they want to play soccer or something or let's go walking to the store or something like that."

*Individual.* Two overweight participants mentioned attitudinal factors might help someone get fit. One girl suggested someone could get fit, "if you wouldn't have as many excuses as many people do." The other girl stated the key to getting fit is, "to have a good attitude, and just do it, do the activities. Not care what other people think and just keep going and going."

*Task.* Overweight participants indicated that task factors might be a key in getting someone to be fit. One youth thought that sport would be a good way to control weight and get fit. She spoke in the following manner about her sister:

> ...my sister should get involved in sports, and I think my Mom should put her in soccer or anything just to help her lose weight...

Similar to the normal group, one participant suggested that someone could get fit if they could just find an activity they are good at. She stated, "they could find something they are good at and like, they could join a team and they could be really good at it, and that's how they get started."

Participant's perceptions of what might get them or someone else to become physically fit revealed several environmental factors. Both groups viewed encouragement from others as a key to getting fit. However, normal weight girls further suggested environmental factors such as exercising with a pet, finances, and motivation from negative comments from others. Lower order themes also emerged for individual factors as well. Overweight girls perceived a positive attitude and not making excuses as a way to initiate fitness. Normal weight girls, on the other hand, suggested that wanting to be well, enhancing appearance, and being a role model for others would be motivating factors. Both groups also agreed that finding an activity you like or are good at is a key to becoming physically fit.

### *Summary*

One aim of this research was to examine how Hispanic adolescent females defined fitness and /or what their perceptions of a fit person were. Normal weight girls strongly linked being fit with sports participation, whereas overweight youths described fitness in more health-related terms.

Another aim of this study was to expose individual, environmental, and task constraints, which might impact Hispanic female adolescents' perceptions of physical fitness. In addition, this research attempted to determine if there were differences in these constraints between normal and overweight participants.

To examine individual constraints, participants were asked to discuss their own fitness level, what they would change, and the value of fitness. Normal weight girls reflected more positively on their current level of fitness and suggested that increasing their level of participation in sports would be the primary change they would make. Overweight participants rated their level of fitness in less positive terms and cited losing weight and increasing cardiovascular health as things they would change about their current fitness level. Both groups believed that discontinuing physical activity would lead to deteriorating health, but cited different reasons for why being fit was important. Normal weight girls suggested fitness was important relevant to being in shape and in good health, whereas, the overweight group viewed fitness as an important factor in weight control.

Environmental constraints were explored by asking normal and overweight youths the following questions: Where have you learned about fitness?, Who in your family do you think is most fit?, Has anyone or anything ever discouraged/encouraged you to be fit?, and, What are some reasons you or someone you know might stop being fit?

Overall, normal weight girls revealed more sources from where they learned about fitness than overweight participants. The normal weight groups also mentioned they learned from their own experiences in physical activities as well. Both groups

perceived fathers and sisters as the most fit family members. Normal weight youths perceived them as being fit due to their involvement in sports. In contrast, overweight girls believed these family members were fit because of exercise-related activities versus sports.

Discussions with participants about who or what had discouraged them yielded differences in perceived barriers between the girls. Both groups cited negative comments from peers and watching television as barriers, but normal weight participants further suggested family, friends, and finances as external barriers. Overweight girls also cited depression as a possible deterrent from being fit. In terms of perceived barriers to fitness in the future, normal weight girls perceived stress-related distractions (family, jobs, kids) as primary obstacles. Overweight subjects, however, cited issues with health (aging, overweight, cardiovascular health) and mental health (depression) as potential barriers. Normal weight participants perceived more sources of encouragement than overweight girls. The normal weight groups suggested friends, family, and teachers had encouraged them. In addition, normal weight girls perceived enjoyment of physical activity as a source of encouragement.

To examine task constraints, participants were asked: What types of physical activities do you like to do? What is your favorite activity and why? Both normal and overweight groups suggested if they could spend their time any way they wished, participation in sports would take a high priority. In terms of their interest in physical activities, normal weight girls demonstrated higher interest in physical activity overall, particularly in sports. Both groups said that being with friends was the main reason a

particular activity was their favorite. However, normal weight youth further cited skill-related and affective reasons for liking a certain activity.

Finally, when asked what they thought might get them or someone they know to become physically fit, both groups perceived encouragement from others as a key environmental constraint. Normal weight girls revealed more factors overall, but both groups perceived a key to getting fit is finding an activity you like or are good at.

# CHAPTER FIVE

## Discussion

The purpose of this research was to explore the impact of individual, environmental, and task constraints on Hispanic female adolescents' perceptions of fitness. Specifically, the following research questions were addressed: a) How do Hispanic females define fitness and are there differences in these definitions between those who think of themselves as normal weight and overweight?; and b) Are there differences in individual, environmental, and task constraints among Hispanic adolescent females who think of themselves as overweight and normal weight?

Newell's Model (1986) provided a useful framework for gathering and organizing data and reporting results. Because this model proposed that individual factors, environmental factors, and task factors are ever-changing and interacting to influence movement behavior in humans, it provided for a more comprehensive examination of participant's perceptions.

Differences did emerge in definitions of fitness between normal and overweight participants. Descriptions reflected Howley and Franks' (1997) definition, which explained fitness as a state of well-being with a low risk of premature health problems and energy to participate in a variety of activities. It was further suggested that fitness could be categorized in two ways: health-related fitness (i.e., body composition, cardiovascular health, strength, endurance) and skill-related fitness (i.e., speed, agility, balance, power as related to sports and motor performance).

Normal weight participants defined fitness in more sports-related terms. A majority of this group perceived a fit person to be someone who plays sports. This definition was further reflected in normal weight girls' perceptions of who was most fit in their family. This group identified family members to be fit because they were involved in sports. In addition to sports, normal weight girls also demonstrated well-rounded beliefs about fitness by citing health-related and affect definitions similar to that of Howley and Franks (1997).

In contrast, a majority of the overweight group defined fitness in health-related ways (i.e., muscles, weight, diet, exercise). Only two overweight girls defined fitness as being involved in sports. Similar to the normal weight girls, these youths' perceptions were reflected in their descriptions of most fit family members. Overweight girls described family members as fit because they exercised versus participating in sports. Interestingly, both categories of participants' perceptions of fitness were further reflected in their perceptions of their own fitness level, motivations for changing their fitness level, and their interest in and preference for physical activities.

When asked to describe a boy or girl who they thought was fit, both groups described a fit girl in terms of weight (i.e., not too skinny or too fat, has a good shape) and fit boys as having muscles. These descriptions raise the question of where these images come from. Participants' idea of what was the "right" body type conflicted with the literature of the Hispanic cultures ideals of body. McArthur et al. (2004) concluded that Hispanic parents may see a larger, chubbier body size as ideal, which would suggest that participants' perceptions are not being developed at home. Furthermore, these responses could be impacted by the developmental stage of these girls. Most 11-13 year

olds are experiencing body changes related to puberty. Girls typically take on more fat weight and boys tend to gain muscle weight (Malina & Bouchard, 1991). Perhaps their own physical appearance and the appearance of others impacted these participants' perceptions of what a fit person is.

Participants' motivations for changing their current fitness level differed as well. A majority of the normal weight girls perceived they were in good shape because they were involved in physical activity, namely sports. Their view of how to change their level of fitness was to increase their level of participation or level of ability. Normal weight girls expressed the desire and readiness to jump in and be on a team, and get better. This group seemed to understand the relationship between fitness and performance and simply wanted to improve.

Overweight girls, in contrast, most often perceived themselves in poor shape due to lack of activity. This group expressed a desire to be involved in sports, but did not feel ready to jump right in and play. Rather, they felt they should work on their physical self and improve other aspects of fitness first. They also perceived sports as a means of weight control and felt if they "tried harder" at sports it might improve their health-related fitness. Overweight girls seemed to understand the benefits of activity and its link to being fit, but did not portray the same level of motivation or commitment as normal weight girls. They wanted to be active, but it was hard for them to do so. Sports involvement would help with weight control, but the weight would also makes sports participation challenging. Perhaps these results point to a "choice" phenomenon among youths versus a race/ethnicity or cultural issue. These children seemed to understand what fitness is, yet remained unfit. Is there a difference in skill level between overweight

and normal weight girls? If so, how can overweight youth improve their skills and expand their abilities?

This research raises the question of how overweight children can be encouraged to engage in physical activity through a different format or structure. Can sports activities be modified to accommodate their needs? In addition, overweight girls perceived themselves as unfit because they did not exercise. It is interesting that weight control was not the main reason. It could be argued that being overweight supports the literature (McArthur et al., 2004) that the ideal body in Hispanic culture is bigger, thus overweight girls are not unhappy with their body size. However, observation notes recorded by the researcher noted changes in body language and confidence in responses for several overweight subjects during this question suggesting it was a deeper underlying and unspoken issue which commands further investigation. Perhaps the discomfort is the result of being integrated into a culture where girls are encouraged to be thin. How can this population be helped, or how can they change if they are not comfortable confronting the issue of being overweight? Perhaps the bigger issue is lack of skill or support for learning new skills. How can overweight children be lead to participation in physical activity, and feel better about their weight?

Normal and overweight participants demonstrated an understanding of what fitness is, of their perceptions of their own fitness level, and had ideas for ways to become more fit. Further support for Howley and Franks (1997) was demonstrated as normal and overweight participants both perceived the main value of being fit as being in good health. In addition, overweight girls mentioned weight control as a benefit and also thought improving physical skill and competitive ability were additional benefits of being

fit. It is interesting that participants defined fitness and evaluated their own fitness level according to activities in which they personally engaged. In both groups of participants, the need to be fit was well understood and they both exhibited a desire to change their current fitness level. However, these motivation levels differed between the normal weight and overweight girls. This suggests the need for further examination of adolescent females' ideas, thoughts, and beliefs about fitness. It could be that at their age the path to fitness is determined by other factors. What opportunities do they have? What are their options for physical activity other than sports? Using Newell's (1986) framework, age, race/ethnicity, and gender did not solely explain participant's perceptions of fitness which further supported the need of the current study's exploration of environment and task constraints.

Responses from participants relative to environmental constraints were consistent with socialization literature which identified adult figures, such as family members or teachers, and peer groups and role models, as major socializing agents for children (Greendorfer, 1977; Greendorfer & Ewing, 1981). Participants in this study revealed that they learned about fitness from, and participated with, these agents. Participants also perceived teachers and family members as sources of encouragement to be fit. In contrast, peer groups played a dual role. Normal weight girls did mention friends as a source of encouragement for them; however, both groups cited negative comments from peers as the main barrier to fitness. These results reflect Newell's (1986) idea that constraints can serve to limit or encourage behavior.

When participants were asked to reveal their sources of knowledge about fitness, both groups cited their physical education teacher or class as the main source. This

response speaks to the vital importance of daily physical education in these girls' lives. Physical educators obviously helped form participant's ideas, thoughts, and beliefs about fitness, which suggests the need for elementary physical education for all. This need was further supported by the normal weight group who responded that they "learned by doing." In other words, knowledge about fitness was gained via personal participation in physical activity.

As previously mentioned, a majority of overweight girls described themselves as less physically active than others and in poor shape due to a lack of activity. These children, above all others, need opportunities in physical education. If they are indeed getting three days of intense activity as stated in Table 1, yet perceive themselves as unfit and inactive, physical education teachers need to continue to increase their influence on these children's lives. Overweight participants, in particular, expressed a desire to improve physical self, competitive ability, and skill ability. Physical education opportunities are an obvious and affordable means for achieving fitness for this population.

Examination of environmental constraints revealed that family members do impact normal and overweight girls' ideas about fitness. A majority of participants described their mothers and fathers as being somewhat active or very active on the demographic survey (see Table 1). However, responses from interviews revealed that both groups perceived their dad and/or sister (s) to be the fit members in their family. Upon further examination, it became evident that participants' perceptions were based on the fact that they not only saw these family members as being active, but participated with them.

These responses are consistent with the socialization literature; however, it contradicts evidence that daughters tend to see fathers as less supportive than mothers when it comes to sports activity (Martin, Richardson, Weiller, & Jackson, 2004). Perhaps a generational change is occurring in this population. These findings also conflict with research suggesting that sons and daughters tend to be closer to mothers and reciprocate caring and emotional support (Barnes & Olson, 1985; Younnis & Smollar, 1985). While it is interesting that Hispanic mothers were not a main influence in the study's participants' activity levels, it does reflect Crespo's (2000) report that Hispanic females are typically less active than Caucasians. Furthermore, Sternfeld et al. (1999) suggested this lack of influence by mothers could be because they spend time on household and care-giving activities. Results did support the influence of the involved parenting styles of Hispanic fathers discussed in the literature (Hofferth, 2003; Jambanathan et al., 2001; Locke, 1992). A key finding of this study was that Hispanic fathers have a strong influence on their daughters' ideas, thoughts, and beliefs about fitness. Additionally, it was also important that these girls still had sisters to serve as female role models in physical activity.

Another important finding was that normal weight girls are more active with fit family members in a larger variety of activities than overweight girls. These results are congruent with research by DiLorenzo et al. (1998) who reported that active parents are more likely to have active children. Obviously, there is a difference between seeing someone be active and participating with them. Overweight girls cited fewer active family members and referred to members outside the home such as uncles, as most fit family members. One overweight girl also said that no one was fit in her family. These

results speak to the need for active role models that make the time to include fitness activities in their daily family routine.

This study also found overweight girls were not only less active with family members, but engaged in less activity overall than normal weight girls. One point of interest was in the lack of involvement of leisure activities with family members, such as skateboarding, bike riding, or rollerblading. Research has suggested that this population has less access to active toys, but in this study normal and overweight participants came from similar economic backgrounds and should have similar opportunities to be active. These results demonstrate a further need to examine SES in this population. Within the framework of Newell's (1986) model, could this lack of involvement be an issue associated with an individual constraint, i.e., weight? Does weight make it difficult for overweight girls to balance in these activities?

These results are consistent with those of Okely et al. (2004) who suggested body composition and waist circumference were related to motor skills in boys and girls. Using Newell's model, individual constraints interact with task constraints to influence movement. Supposedly, non-weight bearing activities such as biking or rollerblading are appealing to overweight kids because they cause less stress on joints and the cardiovascular system. These results point to the need to create activities that overweight children can feel comfortable doing and feel good about themselves doing them. It also further demonstrates the interaction between individual, environmental, and task constraints.

The influence of family was further identified in participants' sources of encouragement for being physically fit. Family members were the key influences for

both groups, particularly via verbal encouragement. Normal weight girls felt further encouraged by family members through participation with them, and overall cited more sources of encouragement than overweight participants. This supports Garcia et al.'s (1995) findings that females value social support in their efforts to be physically active, and DiLorenzo et al.'s (1998) conclusions that active parents tend to have more active children.

To further examine Hispanic adolescent females' perceptions of fitness, perceived barriers to current and future fitness were discussed. Negative comments from peers were a perceived barrier in both groups. It might be assumed these peers were not friends with participants, particularly because normal weight subjects did mention friends as a source of encouragement. Normal weight subjects did perceive more barriers to fitness in their current lives than overweight girls, but they do not appear to prevent this group from being fit. An example of a financial barrier was one girl who could not play soccer at school because her parents could not buy her shoes and pay for her brother's graduation party at the same time. Even though she could not play soccer at school, she still maintained a good level of physical fitness. The literature (Garcia-Coll et al., 1995; Jambanathan, 2001; Sternfeld, et al., 1999) suggested that chores and taking care of younger family might be a barrier in this population. Chores were ranked high as a time priority in these girls' lives, although only one overweight participant thought chores prevented her from being physically fit. In addition, caring for young family members did not appear to be a high priority for participants and thus was not perceived as a barrier.

Research in the Hispanic population has suggested they watch a lot of television and it is related to overweight problems in female youths (Anderson et al., 1998; Lowry

et al., 2002, McArthur et al., 2004). Contrary to these findings, both groups mentioned television as a distraction, although only one overweight participant perceived television as a barrier to fitness.

Differences between the groups again emerged when participants were asked to look ahead and identify things they might perceive as barriers to being fit in the future. Normal weight girls mentioned stress-related events such as work, family, and school as potential barriers. A majority of overweight girls, in contrast, saw health concerns as potential barriers. Are these perceptions a reflection of environmental constraints in their current lives? Do normal weight girls live or see their parents living a lifestyle marked by the stresses a healthy busy life brings? For overweight girls, are health issues a barrier to fitness in their own or their family's current daily life? Do overweight youths see depression, cardiovascular fitness, and physical complications due to weight as barriers in the future because they are seeing them now? If this is true, a longitudinal look at this population is not optimistic. If the constraints in these youth's lives now remain the same, they will prevent overweight children from being fit in the future. Likewise, the stresses of daily life do not prevent normal weight kids from being fit and, likewise, will not serve as barriers in the future.

A key question these results raise is how can this problem be solved? One normal weight girl told of how she tried to get her overweight sister to exercise with her, but her sister did not want to because she gets tired quickly and wants to quit. Overweight kids do get tired faster and do not want to play. Research has demonstrated that girls have an aversion to intense activity (Brustad, 1996). For overweight girls, it can be concluded physical activity is even less appealing, even though participants in this study expressed a

desire to be active. These results suggest a need for change in the structure of sports and physical activities to accommodate overweight girls. The current structure, which emphasizes outcome and caters to those who are highly skilled, is not empathetic to the needs of overweight youths. Furthermore, overweight girls demonstrated a higher interest in leisure and miscellaneous types of activities such as dance. Is there a way to structure school and community programs to cater to their needs?

Newell (1986) defined task constraints as factors such as type of activity, goal of activity, rules of activity, and equipment available. Examination of task constraints in normal and overweight participants both revealed a great interest in tasks which involved being with their friends and participating in sports activities. These results were further reflected when participants identified activities as their favorites because they got to be with friends.

Normal weight girls showed interest in a greater number and variety of activities than overweight girls. It was also apparent that normal weight girls spent more time in adult structured activities such as sports, whereas overweight girls tended to be involved in more leisure and dance activities. This perhaps could be explained by the previously mentioned findings that normal weight girls are more physically active with fit family members than overweight participants. In contrast to the overweight group, normal weight girls suggested they chose activities in which they could demonstrate competence or be challenged. Another significant difference emerged in the intensity of activities in which participants engaged. Normal weight girls were also involved in vigorous sports activities such as soccer and basketball, as well as a variety of leisure activities.

Responses from overweight girls, on the other hand, supported the literature (Brustad, 1996; Crawford et al., 2001) and identified less intense sports such as volleyball and swimming as favorite activities, and favored less structured activities more overall. Both groups also stated that certain activities were their favorite because they enjoyed the movement. For example, one overweight girl stated that she loved to swim because her body felt free and she could do things in the water that she normally could not do. However, does a crowded co-ed swimming class encourage this young woman to do what she enjoys? Results of this study show an urgent need for change and again raised the question: What are we offering overweight youths? Where can they go to be active, feel good about their bodies, and enjoy the movement? Within Newell's (1986) framework, how can environmental constraints interact with task constraints to influence the individual?

The last question in the interviews asked participants to discuss what they thought might initiate the desire to become fit in someone who is not currently fit. Clear differences again emerged in participants' ideas, thoughts, and beliefs. Normal weight girls cited several external sources including encouragement from others. One normal weight participant further stated she would be motivated by negative comments and another thought if someone needed her to be a role model, she would be encouraged to become fit. These responses reflected a level of motivation in these participants that they perceived themselves as ready and willing to step up to the challenge.

This same motivation did not emerge for the overweight group. The dominant response in overweight youths was that they perceived encouragement from others as motivation to get fit. One overweight girl suggested that to become fit you have to "give

no excuses" and another stated that "having a positive attitude" would help someone get started on the path to physical fitness.

Again, do these responses reflect current constraints in participants' lives? Are normal weight girls meeting the challenge of negativity and serving as role models for others? Are overweight girls finding excuses for not being physically fit or can they change their attitude in order to improve their level of fitness? If so, how can overweight youths' perceptions be changed? Both groups stated they thought a key to becoming fit is finding an activity you are good at or like to do. How can opportunities be created for overweight girls so they do not give excuses, have a negative attitude, or are shown to be less skilled? If finding an activity you like is important, perhaps it would be beneficial to expose children to a variety of activities regularly, at a young age, to increase their chances of liking or becoming good at something.

Newell's (1986) Model is not highly recognized in sports psychology research. However, the questions in this study were unique and the framework of the model provided for a comprehensive and multifaceted approach to the study. While results revealed that environmental constraints were a strong influence on participants' perceptions, the bi-directionality of Newell's model was demonstrated in other ways as well. For example, being overweight or normal weight, as an individual constraint, appeared to be a strong influence on task choices and activity patterns with family and friends. This perhaps suggests a need for further examination of dietary habits, which was not a component of this study. If being overweight has a negative impact on physical activity choices, what can be done to get this population to recognize the problem and make changes?

The results of this study suggest that positive environmental influences for overweight girls might not be as strong as they need to be. Furthermore, when overweight girls see the choices of physical activity available to them, they do not meet their needs or interests. Where does this population go to become physically fit in an atmosphere which they feel like they fit in? Is it possible to help overweight children feel more able and in control of their health habits? Somehow, this population needs to be encouraged that they can change their own personal fitness and live a healthy, active life.

### *Implications*

A point of interest in the participants' perceptions of fitness was their responses in the demographic survey (See Table 1). Overweight girls described themselves as less active than most (which was consistent with interview responses), yet stated they participated in physical activity at least three days a week. This contradiction could be explained by the fact that they were in their physical education classes at the time of the study, and were considering their activity level in class when they responded.

Research has shown that Hispanic women attend physical education classes more regularly than white or Caucasian girls (CDC, 2004); however, it also shows Hispanic girls were less likely to play on a sports team (US Census Bureau, 2000). Jamieson, Araki, Chung, Kwon, Riggioni, and Acosta (2005) further concluded that Hispanic girls were not active in their free time and that the importance of physical education in getting these youths to be active should not be overlooked. Findings in the current study demonstrate that participants have a desire to be involved in physical activities, but may not choose to do so. This was particularly true of the overweight group. Physical

educators must be reminded of their value in Hispanic females' lives and continue to seek ways to accommodate their needs.

A related implication from the findings of this study was the need to re-structure physical activity programs for adolescent youths, including physical education. Normal weight girls demonstrated moderate to high levels of interest in many sports and leisure activities. It is important that attention is given to their needs in order to keep them involved in participation. Overweight children demonstrated less interest in sports and physical activities, but still understand how important these activities are to becoming physically fit. This group is not interested in intense activities, but expresses the desire to improve skill and competitive ability. How can sports programs, recreation and leisure departments, physical education classrooms, public and private youth programs be modified to gain overweight youths' interest? Participants spoke to the importance of finding something you are good at in order to be active. Programs such as Girls on the Run are one attempt to develop skill ability and competence in inactive girls; however, overweight girls might think of running as too hard and not want to join. It is imperative to examine overweight youths interest and develop programs which cater to their interests and needs, particularly at the elementary level.

Participants' definitions of fitness showed at least a basic understanding of health-related and sports-related concepts. Key to this study was the finding that these definitions were a direct reflection of what they experienced in their environment. Normal weight girls witnessed family members being active in sports and were more likely to be active with them. Normal weight girls also demonstrated more interest in a greater variety of and more vigorous types of activities. This group also perceived they

were encouraged to be fit from more sources, particularly family. Overweight girls' definitions of fitness, likewise reflected what they saw in their environment. However, they were less likely to participate in activities with family members, demonstrated less motivation and interest in physical activities, and were less likely to engage in vigorous activities such as sports. These findings suggested implications for parents in the Hispanic culture. Results clearly demonstrated the value of parents being active with their children, particularly at young ages. Obesity can be prevented, but is difficult to cure in older children. This message needs to reach parents in order to change the home environment and help increase fitness levels in overweight girls.

A final implication of this research is that further investigation of this population is needed. That being said, it is easy to see why studies of this nature are scarce. Access to Hispanic students is difficult to obtain. For the current study, two obstacles which stood in the way, were the overprotective nature of school officials and gaining parental consent. Numerous principals were approached in an attempt to solicit students for this study. Principals who declined to participate stating they were concerned conflicts could arise with the parents of these children. These officials also discouraged the researcher from working with this population because parental consent would be too difficult to obtain. Another school district recognized the problem with parental consent and granted permission to use passive consent to conduct research with this population, however, human subject's approval for this method could not be obtained by the researcher from the University I.R.B.

The Hispanic population is the fastest growing in the United States. A high percentage of children of this population live in poverty, are overweight, and have Type

II Diabetes. If better understanding of the problem and, potentially, a solution are to be reached, new ways to gain access to this population must be initiated.

### *Delimitations and Limitations*

Delimitations for this study included a small sample size and that children were between ages of 11 and 13. The sample size, because it was small and specific, may limit the ability to generalize the results to a larger population. Results also reflected children's perceptions between the ages of 11 and 13, however, it is not known if these perceptions were formed at a younger age or at the present time in their life. This study was further delimited by selecting participants based on their self perceptions of weight versus BMI or quantitative measures. This could have allowed for greater inconsistency of weight descriptions within the sub-groups.

This study was further limited by the possibility the children gave socially desirable answers. For instance, they knew they were participating in a study about fitness, therefore when asked if they thought fitness was important, participants may have felt they had to say yes. It needs to be acknowledged that responses could have been biased by their desire to appear knowledgeable.

A final limitation was socioeconomic status. Participants were from schools in which 50% or more of the student body were enrolled in the free lunch program or from families whose children were enrolled in this program. It is important to note that while SES was controlled for to a degree, undetected differences in economic status could have existed between and within the sub-groups.

*Recommendations for Future Research*

The current study did help to provide a better understanding of Hispanic adolescent females' perceptions about physical fitness, while at the same time determining the need for further research in a variety of areas. However, overweight statistics for Hispanic boys also demonstrated that there is a need for exploration into their thoughts ideas and beliefs about fitness. While boys are thought to engage more frequently in sports and physical activity, a high percentage of Hispanic boys are inactive, overweight, and have Type II diabetes.

Another area that needs continued investigation is the effectiveness of after school and out of school programs. A variety of programs are available through community centers, YMCA's, recreation departments, and churches but, if and how they are effective in helping girls, particularly those who are overweight, to be physically fit is not well-documented.

The influence of SES is another area that needs further investigation. Children in the current study did allude to financial priorities as a potential barrier, but how it might influence youths' ideas, beliefs, choices, and decisions regarding physical activity were not explored. Participants wanted to be involved in sports but, were not on organized teams. Perhaps examining SES would provide a better explanation.

Peers emerged as an environmental constraint for both groups. For normal weight girls, peers were both a source of encouragement and a barrier. For overweight children, peers were only cited as a barrier. These results suggest the need for further exploration of ways to create positive peer groups, particularly for overweight girls. Perhaps a stronger emphasis on character education at the upper elementary and junior high level

would help overweight children from being isolated. Participants perceived physical education as a source of knowledge and encouragement to be fit, yet overweight girls my be discouraged from participation by negative peer comments. NASPE Standards for teachers state that a physically educated person should demonstrate respect and tolerance for students of varying skill and ability. Ways to enhance and enforce this standard should be further explored. Hellison (2003) proposed a model for teaching children to take responsibility for themselves and others through physical education. Perhaps such a model could be modified and incorporated into school programs to help overweight youths.

A fifth and final need is for further study of Hispanic parents' ideas, thoughts, and beliefs about fitness. Previous research suggested that parents who enjoy activity are more likely to have active children. Research has attempted to document parenting styles and cultural beliefs in Hispanic immigrant parents, but very few of these studies have utilized qualitative methods to gather data. Most of the participants in the current study had at least one parent who did not speak English. Perhaps a language barrier might make studying this population using qualitative methodology challenging.

### *Conclusion*

In this study, Hispanic adolescent females defined fitness in both health-related and sports-related terms. Normal weight girls defined being fit in more sports-related terms while overweight participant's defined fitness in health-related terms. This was reflected in their descriptions of fit family members as well.

Differences in individual, environmental, and task constraints emerged as well. Normal weight participants perceived themselves as more fit and demonstrated a higher level of motivation to be fit. Environmental differences also emerged as normal weight girls were more active with family members and perceived more external sources of encouragement to be fit than the overweight group. Peers were perceived as a barrier to fitness by both groups; however, they were also viewed as an additional source of encouragement by normal weight girls. Finally, results revealed differences in task constraints between the participants as well. Normal weight girls reported that they engaged in physical activity more frequently and in a greater variety of activities than overweight participants. Normal weight youths also demonstrated higher interest in and more participation in vigorous activities than overweight girls.

Children's perceptions of fitness start to be shaped at a young age. By the time they reach adolescence, parental influence starts to have less impact, physical education is no longer required, and sports teams cost money or are required to select team members based on skill. This study showed that Hispanic female adolescents who had active parents and physical education classes were most likely to be physically fit, despite a lack of opportunity in organized sports.

# APPENDICES

Appendix A

Demographic Survey

*Section One*

Name_____ Today's Date_____

What is your current age? _____years old. Are you a _____boy _____girl

How long have you attended your current school? _____year(s). Grade_____

Please circle a response for numbers 1 through 5

1. With which of the following do you identify most?
   a. African American/Black
   b. Mexican American/Hispanic
   c. Native American
   d. Middle Eastern American
   e. European American/White
   f. Asian American/Pacific Islander
   g. Multiracial

2. Which of the following best describes how you think about yourself?
   a. underweight
   b. about right
   c. overweight

3. Which of the following best describes how you think about yourself?
   a. shorter than most kids my age
   b. same height as most kids my age
   c. taller than as most kids my age

4. Which of the following best describes how you think about yourself?
   a. less physically active than most kids my age
   b. equally as physically active than most kids my age
   c. more physically active as most kids my age

5. Which of the following describes how you think about your parents/guardians?

| Father or male guardian | Mother or female guardian |
|---|---|
| a. Very physically active | a. Very physically active |
| b. Somewhat physically active | b. Somewhat physically active |
| c. Not physically active | c. Not physically active |

6. Please indicate which of the following best describes you by filling in the blank with a number.

   a. On how many of the past 7 days did you exercise or participate in sports for at least 20 minutes that made you sweat and breathe hard? _____ days

   b. On how many of the past 7 days did you do stretching exercises such as toe touches, knee bends, or leg stretching? _____days

   c. On how many of the past 7 days did you do exercises to strengthen or tone your muscles, such as push-ups, sit-ups, or weight lifting? _____days

7. Please look at the list of activities below and rank them 1-8 according to how you spend your time. Number "1" should be placed by the activity that is of most importance or you must do. Number "8" should be the activity of least importance or at which you spend little time.

   _____Playing with friends

   _____Household chores

   _____Playing computer or video games

   _____Homework/School activities

   _____Watching television

   _____Family time (dinner, community or church activities)

   _____Participating in sports and physical activity

   _____Taking care of younger family members

8. If you had your choice and could change how you spend your time, how would you rank order this list? Number "1" should be the activity at which you would most like to spend time at. Number "8" should be the activity at which you would least want to spend time.

   _____Playing with friends

   _____Household chores

   _____Playing computer or video games

   _____Homework/School activities

_____Watching television

_____Family time (dinner, community or church activities)

_____Participating in sports and physical activity

_____Taking care of younger family members

*Section Two*

Physical Activity Interest Inventory

The following is a list of things that kids your age might engage in. Please read the list and rate your level of interest in each activity according to the scale below.

**Please circle ONE level of interest response for each of the activities listed below.**

| | 1<br>Not interested | 2<br>More interested | 3<br>Very interested | 4<br>Would love this activity! |
|---|---|---|---|---|
| Walking | 1 | 2 | 3 | 4 |
| Hiking | 1 | 2 | 3 | 4 |
| Jogging | 1 | 2 | 3 | 4 |
| Rollerblading | 1 | 2 | 3 | 4 |
| Skateboarding | 1 | 2 | 3 | 4 |
| Swimming | 1 | 2 | 3 | 4 |
| Bicycling | 1 | 2 | 3 | 4 |
| Bowling | 1 | 2 | 3 | 4 |
| Dance Exercise | 1 | 2 | 3 | 4 |
| Social Dance | 1 | 2 | 3 | 4 |
| Cheerleading or Dance Team | 1 | 2 | 3 | 4 |
| Volleyball | 1 | 2 | 3 | 4 |

| | | | | |
|---|---|---|---|---|
| Football | 1 | 2 | 3 | 4 |
| Softball/Baseball | 1 | 2 | 3 | 4 |
| Soccer | 1 | 2 | 3 | 4 |
| Tennis/Badminton Racquetball | 1 | 2 | 3 | 4 |
| Basketball | 1 | 2 | 3 | 4 |
| Gymnastics | 1 | 2 | 3 | 4 |
| Ice/Floor Hockey | 1 | 2 | 3 | 4 |

**Recess Games like:**

| | | | | |
|---|---|---|---|---|
| Jumping rope, tag | 1 | 2 | 3 | 4 |
| Snowboarding | 1 | 2 | 3 | 4 |
| Snow Skiing | 1 | 2 | 3 | 4 |
| Water Skiing | 1 | 2 | 3 | 4 |
| Canoeing/Kayaking | 1 | 2 | 3 | 4 |
| Karate/Tae Kwon Do | 1 | 2 | 3 | 4 |
| Weightlifting | 1 | 2 | 3 | 4 |
| Golf | 1 | 2 | 3 | 4 |
| Other | 1 | 2 | 3 | 4 |

Appendix B

Interview Guide

Introduction

Today I am going to ask you questions about your perceptions of physical fitness and physical activity. At any time during this interview, feel free to ask questions, or to not answer questions. All of your answers are "Right" because they are about you! Before we begin I am wondering what you have heard about this study? Anything? Are you ready to begin? Let's get started.

**Definition of Fitness**

How would you define physical fitness? What do you think being physically fit is?

Can you describe a boy in your class who you think is fit?

Yes Tell me about him. What are some reasons you think he is he fit?

No How might you describe a boy who is fit?

Can you describe a girl in your class that you think is fit?

Yes Tell me about her. What are some reasons you think she is she fit?

No How might you describe a girl who is not fit?

**Individual**

How fit or in shape do you think you are? Good, moderate, poor?

What are some reasons you think this? How do you know you are fit or in shape?

What do you think would happen to you if you stopped being active?

If not active-What do you think would happen to someone if they stopped being active?

Is there anything you would change about your current fitness level?

Yes what would you change, Why?

No What are some reasons you wouldn't change anything?

Do you think it is important to be physically fit? Why or why not?

Yes What do you think the value of being fit is?

No why don't you think it is important?

**Task**

What kinds of active things do you like to do? What kinds of things do you like to do on the weekends or after school?

If several What activity do you like the best? What makes it your favorite? What do you enjoy about it? What are some reasons you do this activity?

If none Why aren't you involved in physical activities? If you had to be involved in one, what would it be? Why?

What are some things that keep you from being involved (cost, time, etc.) ?

Are there things that don't involve _____ that you could do to keep fit?

Are there activities which are not physically active or sports-related that you enjoy?

Yes What do you enjoy about these activities? What about them keeps your interest?
Do you prefer these over physical activities?
You spend a lot of time doing (non-physical activity), what keeps you from giving this up to do more physically active things?

No Are there activities that are not physical activities that you would like to do?
Why would you do these?
What keeps you from doing these activities?
Would you prefer these over physical activities? Why?

**Environmental**

You seem to know a lot about fitness! Where have you learned about fitness? Where did you get all this from?

If a friend wanted to know about fitness, whom could he or she ask? How could your friend find out more?

Who in your family is most physically fit?
How do you know?
What types of physical activities do you see them do to stay fit?
Are there activities you do with them?

Yes What? What are some reasons you do these?

No Are there activities you would like to do with them?
What? What are some reasons?

Who is second most fit in your family?
How do you know?
What types of activities do you see them do?
Are there activities you do with them?
May 1 , 2005 Yes What? What are some reasons?

No Are there activities you would like to do with them?
What? What are some reasons?

Has *anyone* ever discouraged you from being physically active? Who?
Yes How did they discourage you? What are some reasons you felt discouraged?

No Do you feel there is *anything* has ever discouraged you from being physically active? What are some reasons you felt discouraged by this?

Has anyone ever encouraged you to be physically fit? Who?
Yes How did they encourage you What were some reasons you felt encouraged?

No Do you feel anything else has encouraged you to be physically fit? What are some reasons you felt encouraged?

What are some reasons you or someone you know might stop being physically active?
How or why do you think this stops you or them?
Can you think of anything that might prevent or keep you or someone you know from being physically active?
How or why do you think this would prevent you or someone you know from being active?

Appendix C

Human Subjects Approval

To: Martha E. EWING
138 IM Sports Circle
MSU

# Initial IRB Application Approval

**IRB # 05-266** **EXPEDITED** 2-6, 2-7
**Approval Date:** **April 28, 2005**
**Expiration Date:** **April 27, 2006**

*PERCEPTIONS OF FITNESS AND PHYSICAL ACTIVITY AMONG HISPANIC FEMALE ADOLESCENTS.*

The University Committee on Research Involving Human Subjects (UCRIHS) has completed their review of your project. I am pleased to advise you that your project has been approved.

The committee has found that your research project is appropriate in design, protects the rights and welfare of human subjects, and meets the requirements of MSU's Federal Wide Assurance and the Federal Guidelines (45 CFR 46 and 21 CFR Part 50). The protection of human subjects in research is a partnership between the IRB and the investigators. We look forward to working with you as we both fulfill our responsibilities.

Renewals: UCRIHS approval is valid until the expiration date listed above. If you are continuing your project. you must submit an ***Application for Renewal*** application at least one month before expiration. If the project is completed. please submit an ***Application for Permanent Closure.***

Revisions: UCRIHS must review any changes in the project. prior to initiation of the change. Please submit an ***Application for Revision*** to have your changes reviewed. If changes are made at the time of renewal, please include an ***Application for Revision*** with the renewal application.

Problems: If issues should arise during the conduct of the research, such as unanticipated problems, adverse events, or any problem that may increase the risk to the human subjects, notify UCRIHS promptly. Forms are available to report these issues. Please use the IRB number listed above on any forms submitted which relate to this project or on any correspondence with UCRIHS.

Good luck in your research. If we can be of further assistance, please contact us at 517.355.2180 or via email at UCRIHS@msu.edu. Thank you for your cooperation.

Sincerely,
;::J ..L/ ~
Peter Vasilenko, Ph.D.
UCRIHS Chair

c: Dana Munk
2315 Oakwood Avenue NE
Grand Rapids, MI 49505-4121

OFFICE OF
**RESEARCH ETHICS AND STANDARDS**

University Committee on Research Involving Human Subjects

Michigan State University
202 01ds Hall East
Lansing, MI 48824

517/355-2180 FAX:
517/432-4503 Web:
www. humanresearch .msu .edu
E-Mail: ucrihs@msu.edu

## Appendix D

## Parental Consent Form

Your child's school has agreed to take part in a research study being conducted by Dana Munk, a doctoral student, under the supervision of Dr. Martha E. Ewing, at the Institute for the Study of Youth Sports at Michigan State University. The purpose of this study is to investigate children's perceptions of physical fitness in order to gain insight on how to better educate them about being physically fit.

Participation in this study will involve a survey, which will take approximately 10 minutes and possibly a 20-minute interview with the investigators. Questions will focus on the child's specific ideas, beliefs and perceptions of physical activity. The interview will be audio taped and transcribed. Your child can refuse to have the interviews audio taped or have it turned off during any part of the interview. Audio tapes will be erased at the completion of the study. In addition, your child may be contacted after the interview to clarify responses to questions.

Responses to the survey and interview will remain confidential; no one except the investigators will have access to these responses. Results will be based on the answers given by all participants as a group insuring confidentiality of individual responses. Your child's privacy will be protected to the maximum extent allowable by law.

Your child's participation in this study would be greatly appreciated. However, please know that he or she may withdraw from participation at any time without penalty. Furthermore, he or she may refuse to answer specific questions on the questionnaire and/or interview they feel uncomfortable answering and can still be part of the study. If you have questions concerning your child's participation, please contact the principle investigator Dr. Martha E. Ewing at (517) 353-4652 or Dana Munk at (517) 861-0986 or munkd@gvsu.edu. If you have any questions or concerns regarding your child's rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact-anonymously, if you wish-Peter Vasilenko, Ph.D., Chair of the University Committee on Research Involving Human Subjects (UCHRIHS) by phone (517) 355-2180, fax: (517) 432-4503, e-mail: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, Mi., 48824.

Thank you for your time and cooperation,

_____ _____

Dr. Martha E. Ewing, Principal Investigator Date

_____ _____

Dana Munk, Graduate Student Date

Your signature below indicates that you DO NOT wish for your child to participate in this study.

_____ _____

Parent's Signature Date

_____

Child's Name (Please Print)

Should my child be interviewed, I grant my permission for it to be audio-taped

_____Yes _____No

## Apéndice D (en Espagnol)

La comprensión de los niños de su propia salud y estado físico
**Permiso de los padres**

Se le pide a su hija/hijo que participe en un proyecto de investigación que llevan a cabo Dana Munk, estudiante de posgrado, y Dra. Martha E. Ewing, supervisora, bajo los auspicios del Instituto del Estudio de los Deportes para Niños, de la Universidad Estatal de Michigan. La investigación indiga sobre la comprensión de los niños de su propia salud y estado físico, y tiene el fin de aprender a mejor educarlos sobre los beneficios de un buen estado físico.

Todos los niños que participan en este estudio responderán a una serie de preguntas (una encuesta), actividad que les tomará aproximadamente 10 minutos. Además, algunos participantes serán elegidos por las investigadores para participar en una entrevista de 30 minutos. Las preguntas enfocarán las ideas específicas de los niños, sus creencias y percepciones acerca de la actividad física. Se grabará y se transcribirá toda entrevista. Los niños tendrán el derecho de negarse a participar en la entrevista y de insistir en que se apague la grabadora en el acto. Es posible que unos extractos de las entrevistas se empleen en presentaciones futuras, pero de ser así, se mantendrá estrictamente la anonimia de todos los participantes. Asismismo, puede que sea necesario contactar a algunos niños después de que se complete la entrevista, a fin de que aclaren sus respuestas.

Todos los resultados de las encuestas y entrevistas serán confidenciales; nadie, con la excepción de las investigadoras, tendrá acceso a las respuestas. Los resultados se basarán en las respuestas que den los participantes como grupo. Así se mantendrá la naturaleza confidencial de las respuestas individuales. Se protegerá la privacidad de los niños al grado máximo establecido por la ley.

Se agradecerá muchísimo la participación de su hija/o en este estudio. Sin embargo, entienda que en cualquier momento, su hija/o puede dejar de participar sin sufrir pena alguna. Además, ella/él tiene todo el derecho de negarse a responder a cualquiera de las preguntas si se siente incómoda/o. No importa si decide no responder a todas las preguntas, seguirá siendo participante en el estudio. Si usted tiene cualquier pregunta o duda respecto a la participación de su hija/o en este estudio, favor de comunicarse directamente con la investigadora prinicipal, Dra. Martha E. Ewing (517.353.4652) o con Dana Munk (517.861.0986 o munkd@gvsu.edu). Si usted tiene cualquier pregunta o duda respecto a los derechos de su hija/o como participante, o si se siente insatisfecha/o con cualquier aspecto del estudio, comuníquese anónimamente con Peter Vasilenko, Ph.D., Director del comité "University Research Committee on Research Involving Human Subjects" (UCHRIHS). Comuníquese por teléfono (517.355.2180), por fax (517.432.4503), por e-mail (ucrihs@msu.edu), o por correo (202 Olds Hall, East Lansing, Mi., 48824).

Acepte nuestras más sinceras gracias por su tiempo y consideración,

_____ _____
Dr. Martha E. Ewing, Investigadora principal Fecha

_____ _____
Dana Munk, Estudiante de posgrado Fecha

Su firma denota que usted le da permiso de que su hija/o participe en este estudio.

_____ _____
Firma del padre o de la madre Fecha

_____
Child's Name (Please Print)

Si se elige a mi hija/o para una entrevista, permito que la entrevista sea grabada.
_____Sí _____No

## Appendix E

## Assent Form

Your school has agreed to take part in a research study being conducted by Dana Munk, a doctoral student, under the supervision of Dr. Martha E. Ewing, at the Institute for the Study of Youth Sports at Michigan State University. The purpose of this study is to investigate children's perceptions of physical fitness in order to gain insight on how to better educate them about being physically fit.

Participation in this study will involve a survey, which will take approximately 10 minutes and possibly a 20-minute interview with the investigators. Questions will focus on children's specific ideas, beliefs and perceptions of physical activity. The interview will be audio taped and transcribed. You can refuse to have the interviews audio taped or have it turned off during any part of the interview. Audio tapes will be erased at the completion of the study. In addition, your child may be contacted after the interview to clarify responses to questions.

Responses to the survey and interview will remain confidential; no one except the investigators will have access to these responses. Results will be based on the answers given by all participants as a group insuring confidentiality of individual responses. Your privacy will be protected to the maximum extent allowable by law.

Your participation in this study would be greatly appreciated. However, please know that you may withdraw from participation at any time without penalty. Furthermore, you may refuse to answer specific questions on the questionnaire and/or interview you feel uncomfortable answering and can still be part of the study. If you have questions concerning your participation, please contact the principle investigator Dr. Martha E. Ewing at (517) 353-4652 or Dana Munk at (517) 861-0986 or munkd@gvsu.edu. If you have any questions or concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact-anonymously, if you wish-Peter Vasilenko, Ph.D., Chair of the University Committee on Research Involving Human Subjects (UCHRIHS) by phone (517) 355-2180, fax: (517) 432-4503, e-mail: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, Mi., 48824.

Thank you for your time and cooperation,

_____ _____

Dr. Martha E. Ewing, Principal Investigator Date

_____ _____

Dana Munk, Graduate Student Date

Your signature below indicates that you DO NOT wish to participate in this study.

_____ _____

Child's Signature Date

_____

Child's Name (Please Print)

I grant my permission to be audio-taped.

Yes_____ NO_____

Appendix F

Teacher Letter

Dear Parent or Guardian,

I have been asked to help gather participants for a very exciting study being done through the Institute for the Study of Youth Sports at Michigan State University. Dana Munk, a doctoral student, is studying children's perceptions of fitness and physical activity and needs permission from you and your child before she can begin! This study is completely voluntary on the part of your child and will consist of a brief survey and possibly an interview. If you would be willing to read, sign, and have your child return the attached consent form by _____, I would be most appreciative.

In appreciation for your signed consent form, you will receive a coupon for 10% off at New Balance –Grand Rapids. In addition, should your child be selected to interview, they will receive $10.00 for their participation. I would like to see your child be a part of this important opportunity and would encourage your permission!

_____

Teacher

Appendix G

Researcher's Notes

Date_____Interview Number_____

Participant's Name_____Age_____

Physical Appearance (height, weight, complexion, clothing)

Participant's hesitation and intonations when responding

Participant's posture and other body language when responding

Other notes:

Appendix H

General Dimensions, Higher and Lower Order Themes

General Dimensions: Definitions of Fitness

**Normal Weight Group**

2nd order: Sports Related

Play sports

1. 1. IG:...playing sports p1, L 11
2. A1:...play sports. If it's not at your school at least with your family. p1,L13
3. C: Like, joining sports and trying out stuff. p1, L 14
4. A2: ...everyday when they get out of school, they play a sport. P1, L13
5. M: They are in shape, they play sports and they are in gym..., if I don't know how to play a game, they explain p1,L13
6. DF: She's really active. She is good at any sport we play, and she just wants to keep on playing p1, L16
7. A2: ... And my cousin, she has a lot of trophies cause...she works out everyday
   p1, L 13
8. C:...he looks like he's capable of doing lots of sports like football, soccer p1, L19,20,21

2nd order: Health Related

Have muscles

1. A1: ... if it's a guy, they'd have muscles... p1,L17
2. C:...he's not scrawny...p1,L 19-21

Being Normal Weight

1. DF: Something you do when you really want to lose weight, and want to do exercise and be active. p1,L8

2. A1: If it's a girl they're skinny. p1, L17

3. L: They would be medium... They're not fat or skinny p1, L13

Cardiovascular fitness

1. A1:... When they run they don't breathe heavily p1, L17

Do a lot of exercise

1. AR: Um that you have to be like, um, (inaudible), you have to be like, really good physically. Um, do a lot of exercise; so you can be in good fit, and you won't have bad health p1, l12

2. IG: Exercising...They run a lot and exercise p1, L11, 16

3. C: Like in gym how we do physical fitness and we do sit ups and touch and reach with our toes and we do push, pull-ups. p1. L14-15

4. A1: Like you exercise... p1, L13

5. L:...they would like to do a lot of physical activities like running, jumping, swimming, p1, l13

6. C: Well, I have a friend he's really good at stuff. On our pull-ups he did ten of them. And he's really fit because he runs a lot... p1, L19,20,21

2nd order: Defined as Positive Affect

Enjoyment

1. A2: Well, I like it a lot cause I don't like being in the house sitting down. (Inaudible portion). Every day I have to do something fun or something. I get bored. p1,L8

2. L: It is fun and it's a great way to stay in shape. p1, L9

3. M: ...well I do like physical fitness. I would like to play sports and I like sports. p1,L9

**Overweight group**

2nd order: Health Related

Regular exercise

1. KR: Um, like exercising everyday...My uncle, he has a gym in house, and he, like, lifts weights and goes to exercising places p1,L11,15

2. BA: Exercise... Um, cause he exercises, and lifts stuff,.. p1, L13,22

3. D: Um, a good activity level... they like to do a lot of physical activities.p1,L11,17

4. B: One of my friends she says that every night she does at least 50 push ups... She does at least little bit of exercise every night... I think she sort of does a lot of exercise because they have a trampoline and she's mostly on it and she exercises a lot ... p1,L21,25,29

5. S:...Like walking, exercising, things that I don't do... like she stretches a lot and she runs so fast and that stuff. p1,L14

6. A3: ...and just like play games and have fun. Running around and stuff. p1,L 13

Has muscles

1. BA:... and he has like, like muscles p1,L22

Being a normal weight

1. D: Yeah, they may not be overweight ... p1,L19

2. J: She has a good shape. She isn't real big or real skinny, she's just normal. p1,L26

Physiological Health

1. BA: Being in Shape p1,L17

2. B: You're healthy. p1,L13

3. J: Um, I'm not sure, maybe keeping your body healthy. p1, L13

Eat healthy

1. J: ...and she eats kind of healthy. p1,L22

2nd order: Sports Related

Play sports

1. J: I think my friend. I think she's really physical because she likes to play sports a lot... p1,L21

2. S: It's like doing sports and all the stuff... p1L 10

3. A3: Like they are active and they like play a lot of sports...like my Dad. He likes to play sports and stuff especially basketball. He has a team like every Sunday he plays baseball. They go to the park and play baseball and stuff. He's always running around and he like lifts weights and stuff. p1, L 13,18

Able to do all sports activities in P.E.

1. S:... I really like how she is because she does everything that the teacher tells her to p1, L15

General Dimensions: Perceptions of Own Level of Physical Fitness

**Normal Weight Group**

Good

Like activity/am active

1. AR: I like gym, I like to run. I like to play basketball, volleyball, and, sort of, soccer, and I like to run around my house. p1,L22

2. A1: Um, I think I'm in shape because I play soccer with my brother and my sister sometimes. And I guess, anytime I have time to play with my younger siblings, I do.p1,L22

3. M: Well, I, I do like playing basketball, soccer, I'm not on a team but I think I'm in good shape p12,L18

Active once in awhile

1. IG: ...Like I do it, [exercise] but not that much, and like some people don't at all. p1,L33

2. DF: Um, I'm very active...so I'm active like once in a while. p1,L26

Normal weight

1. IG: Um, I'm not too obese, or too skinny... p1,L33

2. DF: Yeah, but I'm not really skinny... p1,L26

Moderate

Active part of the time

1. L: ... most of the time when I'm not playing outside it's just doing homework and sitting down and doing other work for school so its half and half. p1,L28

2. A2: Well, I think I'm kind of in shape, cause I do play everyday outside and I do, um walk outside for twenty minutes with my mom so I think I'm kind of in shape. p1,L19

Poor

No activity level

1. C: I know because I don't do nothing. Like usually in gym I usually sit out or I don't get dressed or I don't bring gym clothes. And I like, instead of doing what I'm supposed to do I just play around, like on the tennis court I just play with the ball. p1,L29

Not skinny

1. L: I think I'm between medium and fit because I'm not skinny...p1,L24

**Overweight group**

Good

Because play sports

1. A3: I think I'm pretty in shape because I like to play a lot of sports and soccer and stuff. I'm pretty good t them too. p1,L24

Moderate

Diet is poor

1. J: Um, I don't eat very healthy, but I like to exercise and play sports. p1,L30

Overweight

1. S: I think I'm a little bit overweight p1,L19

Poor

Don't like/don't do Exercise

1. KR: I don't like, really exercise everyday... p1,L24
2. BA: Um, I don't exercise at all. p1,L31
3. B: Because I don't exercise a lot p1,L38
4. D: Because some sports, I don't like running... I like some sports, like some football and all that. I just don't like playing it for a really long time p1, L30,34 p1,L35

Overweight

1. BA: Cause, I'm a little overweight p1,L35

General Dimensions: Perceptions of the Consequences of Discontinuing Participation

**Normal Weight Group**

2nd order: Health Component

Lose health

1. AR: I wouldn't be in good health... p1.L38
2. IG: They would stop being healthy. p1,L41
3. M: I wouldn't be in good shape... p1,L24

Eat more

1. DF: I think since like, I'm really weird, cause when I stop doing exercises I start going up in weight. And so when I do exercises I just lower my weight. Yeah, like my cousin, she was really skinny, now she eats a lot and now her pants don't fit her anymore and so she is getting pretty chubby. p1,L38,43
2. A1: Um, I might not look the way I do right now. I might look a little chubbier, or eat more sugar p1,L37

Gain weight

1. A2: Maybe they will go up in weight... p1,L24
2. L: You get overweight... p1,L33

Get sick

1. IG: I might get like, sickness or stuff. p1,L45
2. A2: ...I could get sick if they don't do a lot of exercising p1,L24
3. L: ...and then you just get tired all the time, get headaches... p1,L33

2nd order: Physical Component

Lose fitness capacity/become lazy

1. C: They would probably lose the physical activity they could do. Like, if they don't do pull-ups or any exercise for like a month or two, then I guess

they'll go down more and they won't be able to do it as much because they're so lazy. p1,L39

Watch more TV

1. AR:...I would probably just sit and watch T.V. all the time. p1,L38

2. M: ...I would just be sitting around watching TV p1,L24

2nd order: Social Component

Try to motivate others

1. IG: I would convince them to keep on being active, like to run with me to the park and stuff p1,L37

Be Bored

1. AR: Boring... p1,L39

2. M: ...just be boring... p1,L24

**Overweight Group**

2nd order: Health Component

Gain weight

1. KR: He would be overweight or something p1,L35

2. BA: They would gain weight p1,L43

3. D: They would get overweight p1,L45

4. J: Um, I would probably get real fat...p1,L40

Eat Junk Food

1. B:...and eating junk food p1,L55

Less Healthy

1. B: They would get less healthy p1,L51

Get sick

1. J: ...Probably get more sickness because my body wouldn't be doing anything. p1,L40

2nd order: Physical Component

Get lazy

1 B: They are probably be getting lazy... p1,L55

2. A3: I might not feel like doing a lot of stuff and be kind of like lazy... p1,L29

Lose fitness ability

1. S: Like they'll just get into really bad shape. And like the things they used to do, like stretch a lot they wont be doing that no more because they don't do exercise no more.
p1,L31

2nd order: Social Component

Be bored

1. A3:...and boring...p1, L29

Wouldn't be as nice

2. D:...when you are active your nicer. Maybe they won't be as nice. p1,L45

General Dimensions: Changes Participants Would Make in Current Fitness Level

**Normal weight group**

Wouldn't Change/Maintain activity level

1. AR: No I wouldn't change it. Um, I just think I'm in good shape, I don't, I just need to keep doing what I am doing. p1,L48

2nd order: Increase Sport Involvement or Ability

Be on a sports team

1. A1: If I played sports, like by my school, cause I just love running around and because I grew up with soccer. My dad and older brothers like it so guess I was just born in that environment. So it's something I wanted to do. p1,L41,48

2. A2: I wanna do a lot of different sports, but, like they cost money, and my Mom says not to because she can't afford it. So I just practice everyday and try to get better at it. p1,L28

3. L: I could enter the swim team and I could have probably more fun going to the swimming pool or those places p1,L46

4. M: Yeah, practice more and try being on a team. Like, playing more basketball, soccer, tennis, volleyball p1,L28

5. C: If we did more stuff in gym, Cause in next year, in seventh grade, I'm doing sports for all four seasons. p1,L49,53

Improve skill

1. L: I guess my swimming skill; I guess I would want to be a better swimmer. I can't float. I guess sometimes I get scared in the water then I conquer my fears but they let me wear floaties so I can swim better. p1,L37,41

Run longer/increase activity

1. IG: I would probably run longer than I usually do. Cause I only run for like ten minutes...It would make me like, healthier and not always be tired. p1,L50.54

2. C: Get more physically active p1,L45

2nd order: Improve Physical Self

Lose weight

1. DF: Um, I'd want to lose weight more. Because sometimes I like, don't like running and all that and sometimes my brothers say 'lets play soccer' with them and then they get active, and so I just wish I could lower my body weight. p1,L48,52

**Overweight group**

2nd order: Improve Physical Self

Increase activity for energy and CV health

1. KR: Like exercise more...I like to, like to be active, I like to ride bikes, or jump rope or dance...I would like helping more, instead of staying in bed. You can be healthy and stuff. p1,L45,49,59

2. B: I wish I could run faster... Because I like to run but I have a hard time running because I can never breathe p1,L67,P2,L71

Improve stomach muscles

1. A3: Like, I think I should like workout a little bit more. Like I think I should do a lot more sit-ups. Because like for my stomach, I don't know, yeah. Cause I want to get some abs...So then I feel good and stuff like that p1,L37,45

Lose weight

1. BA: I would lose weight.Um, so I would look good p1,L47.51

2. J: Probably would want to get skinnier. p1,L45

2nd order: Increase Sport Involvement or Ability

Try harder at physical activity

1. D: I'd like to change, the way I do stuff, not just give up and say I can't do it, but actually do it. Like, the 5K. I don't really want to do that. Or the mile run, I don't really want to do that, but I think I should try. So I can be more fit p2,L10

Do sports to get into better shape

1. S: Stretch a lot and do sports. Because I do sports, but weekends and with my friends, but not usually... Because I want to get into better shape p1,L36,40

General Dimension: Perceptions of the Value of Physical Fitness

**Normal Weight Group**

2nd order: Health Related

To be in good health or good shape

1. AR: Because ...you can have good health ...p3,L138
2. IG: You would be healthy... p3,L162
3. A2: ... it makes you stay healthy. p2,L112
4. L: I guess that you get a healthier life... p3,L145
5. M: You can be in good shape... p2,L96
6. C: Because it's like, if you're not physically fit then you won't be able to do nothing. p3,L151
7. L: Like, if you don't stay physical, and you just eat a whole bunch of junk food I guess you will live a little less, although the scientists say that that's not one of the true facts that people live longer. But uh, I guess you will have a healthier life and you will be more fit when you grow up and you can be more active p3,L149

Decrease risk of sickness

1. IG: ... you wouldn't get sick a lot... p3,L162
2. A1: You don't get sick as much... p4,L197

2nd order: Weight Related

Weight control for Cardiovascular health

1. A1: ...if you're overweight you have a greater risk of getting the heart attack, or something else...Your heart stopping I guess. p4,L197,202
2. M: ...you could be a little bit fat and you might get sick in your heart. Because I've seen a lot of people die because they are really fat and they are heart just stopped beating. p2,L96,97

Avoid being overweight

1. IG: ...You wouldn't get fat. p3,L162

2nd order: Body Image

Have body you want and can be happy with

1. DF: Yeah, because a situation may come up where you really have to work hard and you don't have the type of body, and you really want it, and you start exercising maybe you meet someone or something happens that you really want to do and you can't cause your not physically fit. p3,L138

2. L: ... and you will be happier with your body. p3,L144

To be strong

1. IG: And like um, you would be strong p3,L166

2nd order: Constructive Use of Time

Don't waste time sitting around

1. AR:..., you won't waste time just sitting there doing nothing p3,L138

2. C:...And it's better to do something than instead of being home everyday watching TV doing the same old stuff. p3,L52

**Overweight group**

2nd order: Health Related

To stay healthy or in good shape

1. KR: To stay healthy, to stay fit. p3,L151

Decrease in sickness

1. BA: Because if you aren't physically fit, you get diseases, like when you grow up, like diabetes, and different stuff p3,L139

2. A3: Because like, you can get like diabetes and stuff like that and there's like a lot of stuff you can get if you are not healthy and you don't stay physically fit... p3,L130

2nd order: Weight Related

Weight control related to daily living

1. D: It's important to be physically fit because if you are not, you might be like really overweight, and you can't get out of bed and you can't run, do stuff important p4,L11

Weight related to cardiovascular health

1. B: Because like, if you're not really physically fit, or overweight, you can die from all that fat that is around your heart. p4,L180

2. J: Ya, for some people . It depends on their weight and like when they are real big, I think they should lose weight and be more healthy... I don't know I think with all that fat in their body, it may stop their heart. p3,L144,149

2nd order: Ability Related

Competitive ability/skill improvement

1. S: Ya, I think that because you could race with your friend and all this stuff, cause last year I couldn't run so fast and I couldn't beat my friend. But this year like I could beat her and all this stuff, cause she said she don't have it good no more... I think it's important because you can do lots of stuff. Like, people do cheerleading and all that stuff. They can do splits, when other people can't... p3,L124,130

General Dimension: Sources of Knowledge about Physical Fitness:

**Normal Weight Group**

2nd order: External Sources

Learned from PE teacher/PE class

1. AR: School, some things we do in gym p1,L54
2. A1: Um, school, like gym teachers, gym class, and how they are teaching the importance of physical fitness we learned about. p2,L60,64
3. A2: They could ask a gym teacher p1,L39
4. L: I think that the best is Mr. N last year, and Ms. F (PE teachers) they are like, both really good teachers and they help you stay in shape p1,L50
5. IG: My gym teacher... p2,L58

Learned from friends

1. AR:Um, my friends told me about it p1,L54
2. M: When I got here from Texas, they taught me how to play and stuff, and that's when I started to like playing sports p1,L36

Learned from Parents/family

1. AR: Maybe go ask their parents p2,L59
2. DF: I've learned from my cousins p2,L57
3. C: My Aunt...Cause when she was in high school she did basketball and softball, and all this stuff and she had me go to her games with her. And she'll play softball with me outside and get me into it and tell me I need to join sports p2,L1,5
4. IG:...My sister. And family. p2,L62

Learned from Coach

1. A2: Or they could ask a coach p1,L43

Learned from TV

1. A1:...or basically just T.V. shows...Like reality shows I guess p2,L60,68

2nd order: Internal Sources

Learned from playing sports/experiences

1. AR:... join a sport p2,L59

2. A2: Most of the time when I was playing outside, and when I was smaller I was on a soccer team and I liked it a lot, and I just kept on playing it. p1.L33

Learned by own Experiences

1. DF:...or my own experiences since like I eat a lot I go up in weight, and I don't eat I lose weight. And I've learned about (Something Inaudible) to keep like exercising, running everyday, so you just have to keep like running and exercising everyday and you just learn by yourself things p2,L57

2. A1:...and interacting with other people p2,L60

**Overweight group**

2nd order: External Sources

Learned from parents and family

1. KR: Sometimes I go to my uncle's house, we would go up in the gym and run and stuff p2,L66

2. BA: My uncle...Because he does Karate. He taught my brother, and I used to watch them a lot p1,L55, p2,L59

3. A3: Or maybe like their parents or their brothers, sisters. p2,L62

Learned from PE class/PE teacher/Fitness teacher

1. KR:...And school and gym class p2,L66

2. D:...my physical wellness teacher p2,L29

3. A3: They could ask their gym teacher, because they could help them like, they tell them what to do and how many days a week and stuff, and for what reasons p2,L57

4. B: My fitness teacher. At the beginning of the year we learned about physical fitness...I'd say my gym teachers, because they talk about it a lot. p2,L87,91

5. J: Ms. F...I don't know, I think she's just, I think she's the nicest teacher I've had in gym and she explains it better than my other gym teachers did. And she's really fun too. p12,L56,60

6. S: Like, I don't know, the teachers keep telling us to do that stuff and I do it because I want to do the same as somebody else, or get better than somebody else... I would tell them to go like, to a gym teacher, or to like gymnastics and all the stuff p1,L44

Learned from TV

1. BA: T.V...That exercise is good and it can help people p2,L63,67

2. D:...and when I watch T.V. p2,L29

General Dimensions: Perceptions of Physical Fitness in Family Members

**Normal Weight group**

2nd order: Sports-Related

Because see him active in sports

1. AR: Um, he [dad] likes, he likes to do a lot of sports. He walks to the park and comes back. He likes to play sports with us. He just likes doing all the kinds of stuff. p2,L67

2. DF: I'd say my Dad is kind of chubby, but he plays soccer a lot, and he doesn't want to play anymore because he hurts himself a lot like playing a lot, so he is really active... Sometimes he rides bikes. He goes on our street and goes other streets and comes back an hour later. So he does that a little bit of everything. p2,L63,68

Plays sports/teaches me

1. M: When she [mom] was little like me she played a lot of sports and she said she was really good and she would teach me how to play real good soccer... Well, running and walking, but not that much because she was pregnant, she has a baby right now so she can't really jump and run the fast. p1,L44

Lifts weights/plays soccer

1. A1: Whenever he [brother] can he lifts weights and he does play soccer...He knows certain stuff that I don't about soccer, like dribbling and stuff like that. And he teaches me so I can do good in gym. p2,L82,86

Likes to run and good at it

1. L: She [sister]likes running, she likes all those, she always hyper and stuff like that. She's always running outside chasing things that move p2,L68

Full of energy and plays sports

1. C: Because he[cousin] is full of energy, and he always wants to jump up around and play sports and stuff. p2,L15

Participates or has participated in sports

1 IG: She[sister] used to be in the track team p2,L95

2. A1: She [sister] runs a lot and when she runs a mile she always has a good time... when we go to the park, she rollerblades... p2,L99,103

3. M: She [sister] plays with me basketball, and she, she plays soccer with me and I think she really, when she grows up will be in good shape. p2,L62

2nd order: Work Related

Because she does manual labor

1.IG: She [mom] works in a field, and is always carrying around things that are really heavy, and like she kind of runs a little bit. p2,L74

2nd order: Exercise Related

Because always playing outside

1.A2: Because me and my brother are most of the time playing outside and my sister and little brother are inside watching TV and playing video games. p1,L47,50

Because exercises and has arm strength

1. I guess sometimes at the park when we are playing on the monkey bars, he's [dad] better with his arm strength; I have barely any arm strength. Can barely keep on the monkey bars p2,L 81-85

2. C: Because for him, he's [cousin]always like, he likes gym a lot, he don't like do sports or nothing, but he does all the exercises and muscles, not muscles, like pull-ups, like every time we are in the living room. He comes out and is like watch me do this. p2,L32

Because she's active

1. DF: My mom, she likes to ride bikes and all that with my dad also. And she lost a lot of weight so she looks O.K. right now. So she is really active sometimes now. p2,L82

Because not overweight

1. A2: I think I am the most because my brother is a little bit overweight, and Ithink he is the second one p2, L 59

**Overweight group**

2nd order: Sports Related

Because plays sports

1. BA:...[dad]and plays basketball. p2,L75

2. KR: He[dad] likes to play basketball and stuff.

Rough at sports

1. B: My middle brother, because he's in football and they have too. I've seen the video and they play pretty rough.

2nd order: Exercise Related

Has CV endurance and lifts weights

1. B: Because he[dad] can run a lot and a long time ago he used to do weight lifting. And he doesn't really look buff or anything, he looks like a little wimp, but he's really p2,l99

2. B: Because they [brothers] are weight lifters.

Exercises and is active

1. KR: He likes [uncle] to work out a lot and he does a lot of exercises...Like he like, runs everyday, or run walk, he lifts weights, he drinks this drink, I don't know what it is... p2,L77,81

3. BA He [dad]exercises a lot... p2,L75

4. S: ...he [brother] goes to the store on his bike, he walks and he plays soccer a lot. Three times a week I think

5. J: My Dad. Every night, every morning he is like push ups, sit ups, crunches, he likes to walk and run a lot. He used to weigh like three hundred pounds, and his feet were getting cuts on the bottom. So he got on a diet and since then he starts exercising and running every single day. He won't miss a day without exercising. p2,L65

6. A3: Because, like, what, I don't know, he gets out there more, and like, my older sister she doesn't really do a lot because she has a lot of homework that she's like, she's always doing homework actually. So like that, so I always feel that my Dad the most and then like me p2,L70

7. S: So she [sister] says she does a lot of push- ups and runs a lot... Like, I go walking with her to the store, running and all that stuff. I play volleyball, soccer with her... p2,L62,66

8. J: My Mom, because she goes and like, she helped my dad get in that diet. So they went walking together and running. And my Dad kind of liked it and he started going every other day, every day, and my Mom went with him every other day. p2,L80

9. BA: Because she[mom] mostly spends her time walking in the park. p2,L91

Because likes to dance

1. S: Cause she [sister] goes to two hours to like, dance and all that stuff. She has an hour. So she's going to be present on May 26th. p2,L6

Because dance with friends

1. A: So like that, so I always feel that my Dad the most and then like me and my little sister. Because like, we will play like dancing tag. We put on some dance tunes with our friends. p2,L72

No one

Too tired to be fit

1. D: Because they're, well the reasons I don't think my Mom is because she works so much that she gets really tired and she just goes to bed. p2,L43

General Dimensions: Activities Participants do with Family Members they Perceive as Most Fit.

**Normal Weight Group**

1. AR: Basketball, Football throw, Baseball, Walk to the park, play, and sometimes in the summer we go to the lake p2,L76

2. DF: Sometimes we play tennis at the park, or we ride bikes together, or we just play soccer. He beats me because he is really good p2,L73

3. IG: She plays soccer with me...I just like it more than any thing else because I am one of the best at than the other sports p2,L83

4. M: Yes, running and playing basketball p1,L54

5. A1: Yeah, soccer...He knows certain stuff that I don't about soccer, like dribbling and stuff like that. And he teaches me so I can do good in gym. p2,L82,86

6. L: Ya like, races, running, we sometimes play tennis or soccer or volleyball outside. p2,L77

7. C: Oh, we played softball last week. Then he went to the park and played basketball...We go to a skateboard park. He helps me skateboard there. p2,L19,24

8. A2: Because me and my brother are most of the time playing outside and my sister and little brother are inside watching TV and playing video games. p1,L47,50

9. L: I guess sometimes at the park when we are playing on the monkey bars, he's better with his arm strength; I have barely any arm strength. Can barely keep on the monkey bars p2,L85

10. IG: We play like soccer and volleyball. p2,L104

11. A1: We go to skating rinks and we roller skate. Or we go to a soccer field and just play soccer... It is something we have in common, and we were born in that environment so it kind of grew on me p2, L 107,111

12. DF: Sometimes we play soccer with my little brother and we just start playing outside in the back yard because my Dad works and he leaves so we ride bikes, we go to Meijers and all that. p2,L87

**Overweight Group**

1. 1.BA: Play volleyball, and sports…I like playing them p2,L79

2. B: Not really. Sometimes I just play. p2,L104

3. J: Um, we go running and play races, or play soccer p2,L76

4. A3: Sometimes, we go over and play soccer and stuff, or he takes us to the park and we play sports over there or soccer or volleyball and stuff like that. And when he plays baseball he takes us with him. And sometimes we run around the field. p2,L85

5. S: So she says she does a lot of push- ups and runs a lot… Like, I go walking with her to the store, running and all that stuff. I play volleyball, soccer with her… p2,L62,66

6. D: Yeah, I walk

7. KR: Like sometimes, me him, and my little brother, we play basketball together.

8. S: Ya, we play soccer, like our friend when we play soccer.

9. B: Just play.

10. J: No, just help her do chores at the house p2,L86

11. BA: Sometimes I go walking with her

General Dimensions: Perceived Barriers to Physical Fitness

**Normal Weight Group**

2nd order : External Sources

Negative comments from peers

1. IG: A girl in school... She goes to everyone and she thinks she is like "Miss Perfect" and skinny and stuff, and she goes up to everyone and goes like you are too fat and stuff. And she like, um, are weak...That I wasn't working hard enough p2,L108, p3,L112,117

2. L: Well, some girls, well, when I used to, because I used to be a little bit overweight in the beginning of the other year. And they used to always make fun of me and stuff. But my mom told me not to be like that because I used to start to cry, but then I got more active in school and started to lose a little weight...It's like, they told me I couldn't do anything and they told me I was lazy and I got all sad p2,L90,96

Watching TV

1. AR: I would probably say T.V... when it's on and clicked to your favorite show and you were about to go outside and then you stay and watch it. p2,L93,97

2. C: Like, every time I go home I watch TV a lot... p3,L1

Family Commitments and $ priorities

1. DF: Sometimes we travel, and we don't usually run a lot or do anything. Yeah we travel a lot almost every year. We go to my aunt who lives in Florida. I don't run a lot over there... Yeah, sometimes we are too busy or we have a family reunion or something p2,L97,102

2. A1: Um, just family things, like my brother is graduating this year and my mom wants to throw him a big party, or celebration. And I think it was two months ago that they showed us these soccer shoes and it was forty dollars and stuff but she was trying to save up for his graduation p3,L126

Distractions from Boys

1. C:...it's not family or nothing, but it's like boys here at school...Like, if you like them, then that's all you can think about and then after school what are you going to do and it just distracts you from your work and gym

because you don't want to do nothing because you just want to sit there and think about them...

Distractions from friends

1. C:...and I just go outside and me and my friend just sit in her room all day and talk. We don't really do nothing. p2,L46,50 p3,L2

2nd order: Internal Sources

Injury

1. M:... once I broke my hand and I couldn't play basketball. p2,L77

**Overweight Group**

2nd order: External Sources

Negative comments from peers

1. D: Like, when people call me names... It makes me feel bad. p3,L8,12

2. S: Ya, like last year a boy told me that you're so fat and all the stuff and I feel so bad. He kept on telling me and I told a teacher then he got yelled at and all that stuff. And he was like why did you tell on me? Because I don't like you telling me those stuff. That's what I said to him... Like, he made me cry. I went to a teacher and I just started crying, talking. I told her what he said and I just started crying... Like, this year someone told me like, I was going to sit but there wasn't space, but she's like, I'm like, I was going to sit somewhere else, and she's like ya, you don't fit in here you are to fat is what she said. p2,L86,91,96

Busy with Chores

1. KR: Like, I think that my day is to busy, I have to go home and do my chores and clean my room and stuff. p3,L114

Watching TV

1. BA: Watching T.V...I watch T.V. rather than exercise p2,L102,106

2nd order: Internal Sources

Feeling depressed

1. J: Well um, sometimes I just feel like, I don't know, sometimes I just feel like, like I don't want to live anymore, so I don't want to be physical and stuff...Yeah, I don't want to do anything. Just sit until, I don't know, something happens. p2,L94,99

General Dimension: Perceived Sources of Encouragement

**Normal Weight Group**

2nd order: External Sources

Family members participate with or teach

1. A1: My brother... Like he tells me sometimes, when we are playing soccer if I almost got something he tells me another way to do it to get it right. p3,L142

2. A1: My sister for the mile run in school... She runs with me around our house a certain amount of times. p3,L147

3. A2: Well, when I used to play soccer, ... Uncle would play the coach and my cousins told me to play my best and it doesn't matter if I win or lose p2,L78

Family members through negative and positive verbal encouragement

1. C: Um, my aunt...Because she tells me that people like to be lazy, but now I'm starting to do stuff. Because she told me last week that if I keep being lazy I wont be able to do nothing, because I told her I was going to sign up for sports next year, and my aunt tells me that if I keep up this attitude up right now and keep watching TV when you go home you won't be doing nothing next year, because you'll quit right away if you don't keep doing your work. So I was like, I'm going to keep doing it. So she was like do you want to go to the basketball court and do something, and I was like, ya. So she takes me and helps me a lot and then she helps me a lot and she helps me with my free throws and everything. p3,L20

2. AR: Yeah my parents...Eat healthy, just telling me to join sports. So I can have fun and at the same time, get fit and stuff p2,L102,109

3. DF: Yeah, My Grandma, my Mom and my Dad...They always tell me I am losing weight and that I should just keep it up and get into cheerleading and the dance team and everything. So I feel like I can do it so sometimes I do try out...like sometimes they say go outside and run. So I do and get into activities and stuff... p2106,110,92

4. A2: Well, when I used to play soccer, my Mom and my Dad... would play the coach p2,L78

5. L: Hmm, Hmm... my Mom... p2.L104

Verbal encouragement from Friends

1. 1.AR:... my friends have tried to help...p2,L102,109

2. IG: My best friend...Well, we were on the soccer team and she told me that I'm the best one in it... And I'm like "Do you think I'm fat?" and she was like 'No you are just perfect.' She thinks she's fat but I'm telling her she is not fat either. p3,L125,129,133

3. L: Hmm, Hmm. Some of my friends...when we were playing basketball and I made a shot that they were all just like, were all cheering. Then when we played volleyball, and I made a serve and they were all cheering that made me feel kind of happy inside. p2,L104,108

Verbal encouragement from PE teacher

1. C: Mrs. F....She always tell me you're a good shooter and you should try out for basketball next year, and oh, come on, you know you can do this, you've only got three minutes left. She just encourages me a lot.p3,L11

2. L:... Mrs. F, and um, my other elementary teacher. p2,L104

2nd order: Internal Sources

Enjoy Physical activity

1. DF: I like the dance team and cheerleading...I just like learning the routines and all that and you actually perform. I also like drama a lot. p3,L 119

2. A2: Myself, I think...Because I want to, I just like playing. p2, L87,91

Motivation to lose weight

1. L: I guess the doctors. Like, when they told me I was a little overweight I was just trying not to feel like that. I was just trying to lose weight and encourage myself to lose weight.
p3,L114

2. A1: I guess, sometimes in school you kind of feel the pressure to be a certain amount of weight, like to be skinny, but that hasn't really bothered me. p3,L155

**Overweight group**

2nd order: External Sources

Verbal encouragement/persuasion from family

1. KR: my whole entire family...Like, they tell me to go running or ride bikes, or dance with my friends or something like that. p3,L122,124

2. BA: My Mom...Because sometimes when I am at my house and I am watching some sports she tells me I could probably play those sports if I tried my best and exercise. p2,L110,p3,L114

3. D: Yes, my mom...Um, she says that, that um, sometimes we workout and she says that we, that, she says that um, I fell embarrassed to do stuff around her, and she says that its o.k. that I should just do it and a lot of stuff like that p3,L30

4. J: My Mom, my Dad...Well, they're like, well maybe you could be a coach for gym or something, because I like to exercise and play games and stuff, and um, my mom and my dad think I should be a coach for soccer or be a gym teacher in the schools. p2,L108 p3,L112

5. S: Like, my parents are like, why don't you go with your friends and like have fun and like play some sports, and I'm like o.k. then I go to my friends sometimes. He lets me go to their house and all this stuff. And we just play soccer and all this stuff. p2,L101

Babysitter encouragement

1. J: My Nano, She's always telling me that, um, like Jessica you are really good at exercising, just exercise and do this. p3,L118

Vicariously through TV

1. B: Well, sometimes I see people on T.V. playing games or something, and for that you have to be healthy, so sometimes I'll try to. Like, playing football, I mean soccer; I like to play that a lot. But in my case I'm not healthy enough to play that... Because I eat a lot of junk food. p3,L149

2nd order: Internal Sources

Chores as a motivator

1. A3: Sometimes chores help to because like sometimes when I'm feeling lazy or something you can start cleaning or something. p2,L98

General Dimension: Perceptions of Potential Barriers to Fitness in the Future

**Normal Weight Group**

2nd order: Lack of support

Lack of family support

1. DF:... And sometimes like family don't encourage them and they just lose control and they just don't have control over themselves so sometimes they get lots of stress when they feel like they can't get out of it. So that's probably one of the main reasons... Maybe cause, maybe, their parents sometimes, they probably don't have a good life at home. Maybe their parents don't encourage them; maybe they don't care about them. And I'm not saying my parents don't care about me, but some people don't want that's why they go to restaurants and their parents don't care. p3,L124,129

Negative peer comments

1. L: I guess if I were like those girls, they told me stuff like that I guess I could stop them, but it didn't really stop me... I think what would keep them if they kept getting people to tell them stuff or like they, or people kept saying to them that you can't do anything because you're too fat, you can't do something because you are too lazy or ugly or something like that. p3, L123,135

No external expectation

1. L: I guess if a lot of people didn't really look up to me, like, they didn't see me as an example p3,L128

2nd order: Stress related distractions

School related Stress

1. DF: Maybe, um, stress. Like school stress, homework... p3,124

Change of environments

1. AR: I'd say my brother, because he used to be a lot active, but then know all he does practically is just watch T.V. and some of the time he hangs around with his friends... Maybe because we changed states...probably a different environment p3,L117

Job/Kids

1. A1: If you have a job balancing that and kids...Yeah my sister went to college and she has two kids, and currently she is not working. p4,L181,185

2. M: Um, when, when I grow up and being at work or like if I'm a secretary... I would have more time at work and not be in sports. p2,L81,85

Family Distractions

1. C: Because if Mom and Dad aren't together right now and it's distracting him right now... They are a little more upset. p3,L30,34

2. A2: Well, like, if something happens in my family, I would spend more time with my family, but I would still be doing exercising. p2,L94

2nd order: Health Concerns

Tired/sick

1. IG: Maybe if they are tired... They feel like they can't do something. p3,L143,152

2. A1: If I were to get sick p4,L173

Lack of CV fitness

1. A2: Well my sister she doesn't want to, I told her lets go play outside, she says no I don't want to, and I ask her why, she says because I get tired right away. I tell her I get tired too, and she says you get tired in a long time and I get tired in like five minutes. And my mom said because she is overweight and when she runs she gets tired and she doesn't want to p2,L101

Climate

1. A1:...or if it's cold outside p4,L173

**Overweight group**

2nd order: Lack of Support

Negative peer comments

1. D: Like if someone said that you were overweight or called you really mean names to make you feel bad about yourself. Like sometimes people just stop. p4,L2

Parent rules

1. A3: Well, maybe like if your parents don't like go outside and stuff, and like you have to stay out in with them and that kind of stuff...Yeah that would kind of suck wouldn't it?...Because you wanted to be able to play. p2,L107,112,116

No PE

1. S: Like, he might just skip the class of gym and all this stuff...Not having that (pe)class.
   p2,L111

2nd order: Stress related distractions

Work/school

1. KR: Yeah, my older brother, he doesn't really have time because he has to work and go to school p3,L137

Childcare

1. J: My mom gets a little lazy and she doesn't want to go walk with us or play...maybe because of my little sister...she's like, well I need to take care of her and she's too tired.
   p3,L127,131

2nd order: Health Concerns

Feeling sad

1. BA: They can't, they feel sad and don't know what to do...When you are sad you just don't want to do anything p3,L123

Complications with aging

1. D: Well, my Grandma...Cause she's, she's getting older and she's having a lot of surgeries and she's not able to do a lot of stuff. p3,L45

Health complications due to weight

1. B: Well my aunt, she's got it, O.k. this is sort of opposite of what you are saying because my aunt she is um, overweight and she's got problems like, her knees are always hurting and she had back surgery and stuff like that. ...Yeah, and the doctors said she has keep a diet and be physical cause if not then she could get diabetes p3,L163

ack of CV fitness

1. J: My sister, she's five and she's chubby, and I don't want her to be real chubby when she's older and get a heart attack by the time she's thirteen...Yeah, I mean she likes to play touch and stuff, and run around but she gets tired real easy p3,L136

TV

1. S:... he doesn't do nothing but watching TV and all this stuff. p2,L111

General Dimension: Perceptions of Favorite Physical Activities

**Normal Weight Group**

2nd order: Enjoy the Movement

Because fun to win

1. L: I guess soccer... It's like a competitive sport, but sometimes some people get too competitive it's not o.k. but its still fun just to win. p3.L159,163

Enjoy it

1. A2: I just like, I just like the ones that have to do with running... I just like running p3,L122

2. DF:...I don't know. I like to be active and move a lot.

2nd order: Social Reasons

Because with friends

1. AR:[ basketball and soccer] It's probably because I'm with my friends and I'm having fun, and you just get to throw the ball around and kick the ball around. p3,L153

2. IG: I like to play soccer...You get to have fun with you friends and stuff. And like, free to run around and stuff p4,L175,179

3. M: Basketball...I like to run and play with my friends at the same time. p2,L105,109

2nd order: Skill Related Reasons

Because good at it

1. A1: Soccer and swimming I'd have to say...Well soccer, I guess is easy for me to play and understand. And swimming is just fun and something I like to do. p4,L214,220

Can demonstrate skill

1. C: Basketball...Dribbling the ball and shooting. p4,l12,16

Challenge of learning something

1. DF:...So you actually learn [dance] routines and they actually challenge you to do things. So you set a goal and your like I'm going to get through this and you actually do and you learn your routine and your actually fit at the end

**Overweight group**

2nd order: Enjoy the Movement

Because it is movement

1. KR: I like to dance, and play jump rope... Because, like you move a lot, and you like, exercise at the same time. p3,L162

2. BA: Dancing... It has movement.p3,L158,162

Because body is free

1. D: Swimming...Because when you're in the water you just feel like, you just feel free, and you can do whatever you want. p4,L26,30

2nd order: Skill Related Reasons

Because good at it

1. A3: My favorites, I like three. I like to play volleyball, soccer and basketball because I'm good at those p3,L147

2nd order: Social Reasons

To be with friends

1. S: Soccer... Because, like, we played with our friends and we just run a lot. p3,L138,142

2. B: Tag...I don't know, it's just they way it is when I'm with friends. p4,L192,196

3. J: ...rollerblade... I don't know, all my friends like to do it. There's not one friend that don't like to do it and I like it too p3,L158,162

General Dimensions: Perceptions of Favorite Non Physical Activities

**Normal weight group**

2nd order: Passive

Refreshes mind

1. M: Read... Um, makes my mind get refreshed and think about something else, not problems, or if I'm going to win a game or news, just think about reading p3,L121,125

Learning

2. A1: Reading... I guess the new stuff I learn like vocabulary p5,L244

Entertainment

1. L: I like to draw, and I, yeah I like drawing to create comic books just for my entertainment... I don't know. It's the new features you add to a cartoon see, like, if I see something I like about a cartoon, I try to see if I can draw it too and add it to the cartoons I like to draw... p4,L177,181

Fill time

1. IG: Sit around, sometime I don't have anything to do and I just sit down and watch TV. p4,L197

2. DF: I like to watch T.V. but sometimes I am too busy because I'll go over to someone's house and do homework, or I'll start playing with my little brother. So I don't get to watch T.V. a lot... I like to um, listen to the music on T.V. I like to see them dance. I also like movies about sad things p4,L18

2nd order: Interactive

Be with friends

1. AR: Sometimes when you go {shopping} with your friends and you get to try on clothes and you show each other how you look, and stuff and just like to by stuff. p4,L181

2. AR: With your friends if you watch a scary movie you get scared, and stuff. p4,L186,190

Opportunity to be with family

1. A2: I like to play board games... Like, my aunt is living with me right now, and she likes to play card game. And we play Uno almost everyday for about twenty minutes p3,L137,141

2. C: Play games, like board games... Instead of watching TV, me and my cousin just pull out a game and play. p4,L37,41

**Overweight group**

2nd order: Passive

Because fun or like activity

1. KR: I like to sing sometime... I just like it. Its kind of fun to just come out and sing.... or sometimes I just like to listen to music... Um, I like to write... p4,L183,187,204

Manage Emotions

1. BA: I like to draw... The colors and the pictures...Flowers and different objects...Cause when I am like mad, I can just grab my book and start drawing and I feel better p4,L189,193,197

Because bored

1. A3: Sometimes I watch TV or sometimes I go onto the Internet. I don't stay on there that long because I get kind of bored. We have like a game system, and like I don't play it no more. I used to want a lot of those, but I don't play them. I think there kind of boring. p4,L172

2nd Order Interactive

Because allows time to be with friends

1. D: Like to play with my friends... We'll cause, I'm with my friends now, cause when I play games, I like to play with my friends. I just don't like doing things alone. And talk on the phone [with friends]?...I don't know I enjoy it, but I don't know how to say it. p4,L53, 56 p5,L14

2. S: Ya, like, talking to my friends on the phone... Cause we talk about what happened. Cause my friend has different hours than I do, so we just talk about what she did and all that stuff. p3,L166,174

3. B: Me and my friends we will just sit down...and talk...That me and my friends talk about a lot of things and we can trust one another to say things p4,L214

4. J: Sit and talk with my friends, just about how school is going or what has been happening to them...I like talking to my mom, I like talking with my baby sister and my other sister. I like talking a lot with my friends. p4,L183,187

5. B: Me and my friends we will just sit down and watch TV and talk. p4,L214

6. S:...going shopping... Like we see different clothes, and all that stuff. And we go buy shoes and all that type of stuff. p3,L166,170

General Dimensions: Perceptions of What Would Initiate Fitness

**Normal Weight Group**

2nd order: Environmental

Encouragement/support from others

1. AR: Maybe have a friend with you when you are doing those activities, so they would get you more encouraged to do it p4,L199

2. DF: If, probably if sometimes they need another person that they like. And they'll be fit and they wont. And they'll encourage themselves or people encourage them will and they just start working out. And they actually lose weight. So that might encourage them...and also parent support, family support p4,L197

3. C: Like the people who help me or support me, ask me to play games with them I would. Like the way Mrs. F tells me I have to try out for basketball next year and that's what made me want to join it next year. p5,L1

4. A2:... and your parents they can push you and tell you I'm so proud of you, your doing a very good job, and then they go see you. Like, when I go do shows in gymnastics, when my Mom goes with me and she's always telling me I'm doing very good, and that pushes me because I think that my Moms proud of me so I know what I'm doing. p3,L151

5. L:... But I guess what encourages them is that telling them they are doing o.k. I guess that really encourages them p4,L197

Motivation from negative comments

1. IG: People that think your not good enough. The people who are sometimes like mad at you because they probably heard you talking about them... And they are like talking bad about you p4,L210

Have a pet to exercise with

1. A1: I guess if, you have a pet I guess, you could run with it. p5,L266

Budget $

1. A2: Well you could give them some ideas of the prices, like you could get your own fees,

2nd order: Individual

Being a role model

1. A1: If they go to, like if its soccer for instance, and it was a girl you could look up to me.

p5,L259

Exercise to avoid illness

1. A1:...If you have a family member who was sick because they were over weight, you would feel the, I guess you would exercise. p5,L260

Motivation to enhance appearance

1. L: Like, some, like some girls like they do physical activities just to fit into their new outfits and stuff like that p4,L196

2nd order: Task

Find activity you like

1. M: Um, I have a friend in Texas, she hated sweating and stuff and then she likes more reading and being at the library most of the time. Um, I think if she will try to play basketball or soccer that she will be interested in, she will definitely like it. p3,L134

**Overweight group**

2nd order: Environmental

Encouragement from others

1. KR: Well, like my brother, and my uncle, and my other cousin. p4,L214

2. A3: *(Inaudible)* you could do it with them. Like you could do activities with them. p4,L196

3. S: Like, I would tell them if they want to play with me soccer or something or let's go walking to the store or something like that. p4,L186

2nd order: Individual

Give no excuses

1. BA: You wouldn't have as many excuses as many people get p4,L209

Positive attitude

1. D: To have a good attitude, and just do it, do the activities. Not care what other people think and just keep going and going. p5,L21

2nd order: Task

Sports as weight control

1. J: My sister, um my sister should get involved in sports, and I think my mom should put her in like soccer or anything that can just help her lose weight...Or not even if they are big, they can be real skinny, but they still need to be healthy and eat more or they can be just normal. p4,L192

Find activity they are good at

1. A3: Like, they could find like something they are good at and like they could join a team and they could be really good at it, and that's how they get started. p4,L191

# REFERENCES

# REFERENCES


Adair, L., & Gordon-Larsen, P. (2001). Maturational timing and overweight prevalence in U.S. adolescent girls. *American Journal of Public Health*, 91, 642-644.

Anderson, J.D. (1992). Family centered practice in the 1990's: A multicultural perspective. *Journal of Multicultural Social Work*, 1, 17-29.

Andersen, R.E., Crespo, C.J., Bartlett, S.J., Cheskin, L.J., & Pratt, M. (1998). Relationship of physical activity and television watching with body weight and level of fatness among children: Results from the third national health and nutrition examination survey. *Journal of the American Medical Association*, 279, 938-942.

Baca Zinn, M. (1994). Adaptation and continuity in Mexican-origin families. In R.L. Taylor (Ed), *Minority families in the United States: A multicultural perspective* (pp. 64-81). Englewood Cliffs, NJ: Prentice-Hall.

Baranowski, T., Thompson, W., DuRant, R., Baranowski, J.,& Puhl, J. (1993). Observations on physical activity in physical locations: age, gender, ethnicity, and month effects. *Research Quarterly for Exercise and Sport*, 64, 127-133.

Barnes, H., & Olson. (1985). Parent-adolescent communication and the circumplex model. *Child Development*, 56, 438-447.

Bean, F. & Tienda, M., (1987). *The Hispanic Population in the United States*. New York: Russell Sage Foundation

Bouchard, C., Malina, R., & Perusse, L. (1997). *Genetics of Fitness and Physical Performance. Champaign*, IL: Human kinetics.

Branta, C.F., Painter, M., & Kiger, J. (1987). Gender differences in play patterns and sport participation of North American youth. In D. Gould & M. Weiss (Eds), *Advances in Pediatric Sport Series*, 2, Behavioral Issues , 25-42, Champaign, Il: Human Kinetics

Brooks-Gunn, J. (1988). Antecedents and consequences of variations in girl's maturation. *Journal of American Adolescent Health Care*, 9, 365-373.

Brustad, R.J., (1996). Attraction to physical activity in urban school children: Parental socialization and gender influences. *Research Quarterly for Exercise and Sport*, 67, 316-323.

CDC, (2004) Report on Physical Activity Among Children. *American Family Physician*, 69, 440-441.

Crawford, P.B., Story, M., Wang, M.C., Ritchie, L.D., & Sabry, Z.I. (2001). Ethnic issues in the epidemiology of childhood obesity. *Pediatric Clinics of North America,* 48, 855-877.

Crespo, C.J., (2000). Encouraging physical activities in minorities. *The Physician and Sportsmedicine,* 28, 36-51.

Crespo, C., Smit, E., Carter-Pokras, O., & Anderson, R. (2001). Acculturation and leisure time physical activity in Mexican-American adults: results of NHANES III 1998-1994. *American Journal of Public Health*, 91, 1254-1257.

Denzin, N.K., & Lincoln, Y.S. (1994). *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

DiLorenzo, T., Stucky-Ropp, R., VanderWal, J., & Gotham, H., (1998). Determinants of exercise among children II: a longitudinal analysis. *Preventative Medicine*, 27, 470-477.

Eccles, J., & Haorld, R., (1991). Gender differences in sport involvement: applying the Eccles expectancy-value model. *Journal of Applied Psychology*, 3. 7-35.

Eggebeen, D., & Lichter, D., (1991). Race, family structure, and changing poverty among American children. *American Sociological Review*, 56, 801-817.

Ewing, M.E., & Seefeldt, V. (1992). *An overview of youth sports programs in the United States.* Carnegie Council of Adolescent Development, Washington, D.C.

Faucette, N., Sallis, J.F., McKenzie, T., Alcarez, J., Kolody B., & Nugen, T. (1999). Comparison of fourth grade students' out of school physical activity levels and choices by gender: Project SPARK. *Journal of Health Education*, 26, S82-S90.

Fowler, B. (1989). The relationship of body image perception and weight status to recent change in weight status of the adolescent female. *Adolescence*, 24, 557-567.

French, S., Story, M., & Jeffrey, R. (2001). Environmental influences on eating and physical activity. *Annual Review of Public Health*, 22, 309-25

Fuller, B., Holloway, S., & Laing, X., (1996). Family selection of child care centers: the influence of household support, ethnicity, and parental practice. *Child Development,* 67, 3320-3337.

Garcia, A., Broda, M, Frenn, M., Coviak, C., Pender, N., & Ronis, D. (1995). Gender and developmental differences in exercise beliefs among youth and prediction of exercise behavior. *Journal of School Health*, 65, 213-219.

Garcia Coll, C.T., Meyer, E.C., & Brillon, L. (1995). Ethnic and minority parenting. In Handbook of Parenting 2: Biology and Ecology of Parenting (pp189-209). Hillsdale, NJ: Englandiates

Gesell, A., & Thompson, H. (1929) cited from Newell (1986). Constraints on the development of coordination. In M.G. Wade & H.T.A. Whiting (Eds), *Motor development in children: Aspects of coordination and control (pp341-361).* Amsterdam: Martin Nijhoff.

Getchall, K., & Haywood, N. (2001). Lifespan Motor Development. Champaign, IL: Human Kinetics.

Greendorfer, S., (1977). The role of socializing agents in female sport involvement. *Research Quarterly*, 48, 304-310.

Greendorfer, S. (2002). Socialization processes and sport behavior. In Horn., T., Ed. Advances of Sport Psychology (2nd edition). Champaign, IL: Human Kinetics.

Greendorfer, S., & Ewing, M., (1981). Race and gender differences in children's socialization into sport. *Research Quarterly for Exercise and Sport*, 52, 301-310.

Guinn, B., Semper, T., & Jorgensen, L., (1997). Mexican-American female adolescent self-esteem: The effect of body image, exercise behavior, and body fatness. *Hispanic Journal of Behavioral Sciences,* 19,4: 517-526

Harrison, A.O., Wilson, M.N., Pine, C.J., Chan, S.Q., & Buriel, R. (1990). Family ecologies of ethnic minority children. *Child Development*, 61: 347-362.

Harwood, R. L., (1992). The influence of culturally derived values on Anglo and Puerto Rican mothers perceptions of attachment behaviors. *Child Development*, 63, 822-839.

Haywood, K.M., & Getchell, N. (2001). *Lifespan motor development*. Champaign, IL: Human Kinetics.

Hellison, D. (2003). *Teaching responsibility through physical education*. Champaign, IL: Human Kinetics.

Hofferth, S.L. (2003). Race/ethnic differences in father involvement in two-parent families. *Journal of Family Issues*, 24, 185-216.

Howley, E.T., & Franks, B.D. (1997). *Health fitness instructor's guide*. Champaign, IL: Human Kinetics.

Hultsman, W. (1993). The influence of others as a barrier to recreation among early adolescents. *Journal of Leisure research*, 25, 150-164.

Jacobsen, C., (1995). *American Families: Issues in Race and Ethnicity*. New York: Garland Publishers

Jambunathan, S., Burts, D., & Pierce, S. (2000). Comparisons of parenting attitudes among five ethnic groups in the United States. *Journal of Comparative Family Studies*, 395-406.

Jamieson, K., Araki, K., Chung, Y., Kwon, S., Riggioni, L., & Acosta, V. (2005). Mujeres activas: An exploratory study of physical activity among adolescent latinas. *Women in sport and Physical Activity Journal*. (manuscript under review).

Julian, T., McHenry, P., & McKelvey, M., (1994). Perceptions of European American, African American, Hispanic, and Asian American parents. *Family Relations*, 43, 30-37.

King, A., Castro, C., Wilcox, S., Sallis, J., and Brownson, R. (2000). Personal and environmental factors associated with physical inactivity among different race-ethnic groups of U.S. middle aged and older aged women. *Health Psychology*, 19, 354-364.

Kugler, P., Kelso, J., & Turvey, M. (1980) cited form Newell (1986) ). Constraints on the development of coordination. In M.G. Wade & H.T.A. Whiting (Eds), *Motor development in children: Aspects of coordination and control (pp341-361).* Amsterdam: Martin Nijhoff.

Locke, R., (1992) *Increasing Multicultural Understanding.* Newbury Park, CA: Sage

Lowry, R., Wechsler, H., Galuska, D., Fulton, J., & Kann, L. (2002). Television viewing and its associations with overweight, sedentary lifestyle, and insufficient consumption of fruits and vegetables among U.S. high school students: differences by race, ethnicity, and gender. *Journal of School Health,* 72, 413-421.

Malina, R. M., (2002). The young athlete: biological growth and maturation in a biocultural context. In Smith & Smoll (Eds), *Children and Youth Sports: A Biopsychosocial Perspective.* Dubuque, IA: Kendall Hart Publishers

Malina, R.M., Bouchard, C., & Bar-Or, O. (2004). *Growth, maturation, and physical activity. 2nd Edition.* Champaign, IL: Human Kinetics.

Malina, R.M., & Bouchard, C. (1991). *Growth, maturation, and physical activity.* Champaign, IL: Human Kinetics.

Martin, S., Richardson, P., Weiller, K., & Jackson, A. (2004). Role models, perceived encouragement, and sport expectations of United States adolescent athletes and their parents. *Women in Sport and Physical Activity Journal*, 13, 18—27.

McArthur, L., Anguiano, R., & Gross, K. (2004). Are household factors putting immigrant Hispanic children at risk of becoming overweight: a community based study in eastern North Carolina, *Journal of Community Health*, 29, 387-404.

McDade, K. (1995) How we parent: Ethnic differences. In C.K. Jacobson (Ed.), *American families: Issues in race and ethnicity.* New York, NY: Garland.

McArthur, L.H., Anguiano, R., & Gross, K.H. (2004). Are household factors putting immigrant Hispanic children at risk of becoming overweight: A community based study in eastern North Carolina.. *Journal of Community Health*, 29, 387-404.

McKenzie, T.L., Sallis, J.F., Nader, P.R., Broyles, S.L., & Nelson, J.A. (1992). Anglo and Mexican American preschoolers at home and at recess: Activity patterns and environmental influences. *Developmental and Behavioral Pediatrics*, 13, 173-180.

Mirza, N., Kudow, K., Palmer, M., Solano, H., Rosche, C., & Yanovski, J. (2004). Prevalence of overweight among inner city Hispanic-American children and adolescents. *Obesity Research,* 12, 1298-1310.

Munk, D.M., Ewing, M.E., & McCann, P.S. (2002). *Children's perceptions of fitness.* Unpublished manuscript. Michigan State University.

Newell, K.M. (1986). Constraints on the development of coordination. In M.G. Wade & H.T.A. Whiting (Eds), *Motor development in children: Aspects of coordination and control (pp341-361).* Amsterdam: Martin Nijhoff.

Ogden, C.L., Trociano, R.P., Briefel, R.R., Kuczmarski, R.J., Flegal, K.M., & Johnson, C.L. (1997). Prevalence of overweight among preschool children in the United States, 1971 through 1994. *Pediatrics,* 99, E1.

Okely, A, Booth, M., & Chey, T. (2004). Relationships between body composition and fundamental movement skills among children and adolescents. *Research Quarterly for Exercise and Sport,* 75, 238-247.

Okely, A., Booth, M., & Patterson, J. (2001).Relationship of physical activity to fundamental movement skills among adolescents. *Medicine and Science in Sports and Exercise,* 33, 1899-1904.

Patton, M., (2002). *How to Use Qualitative Methods in Evaluation.* Newbury Park, CA: Sage

Pratt, M., Macera, C., & Blanton, C. (1999). Levels of physical activity and inactivity in children and adults in the United States: current evidence and research. *Medicine and Science in Sport and Exercise,* 31, 526-533.

Rainey, C., McKeown, R., Sargent,R., & Valois, R. (1998). Adolescent athleticism, exercise, body image, and dietary practices. *American Journal of Health Behavior.* 22, 1087-3244.

Sallis, J., Patterson, T., Buono, M., Atkins, C., & Nader, P., (1988). Aggregation of physical activity habits in Mexican-American and Anglo families. *Journal of Behavioral Medicine,* 11, 31-41.

Sallis, J., Nader, P., Broyles, S., Berry, C., Elder, J., McKenzie, T., & Nelson, J. (1993). Correlates of physical activity at home in Mexican American and Anglo American preschool children. *Health Psychology*, 12, 390-398.

Sherman, J.B., Liao, Y., Alexander, M.A., Kim, M., & Kim, B. (1995*).* Family factors related to obesity in Mexican American and Anglo preschool children. *Family Community Health*, 18, 28-36.

Smoll, R.E., & Smith, F. L. (1996). *Children and youth in sport: A biopsychological perspective.* Dubuque, IA: Brown & Benchmark.

Sternfeld, B., Ainsworth, B., & Quesenberry, C. (1999). Physical activity patterns in diverse populations of women. *Preventative Medicine*, 28, 3134, 323.

Stucky-Ropp, R., DiLorenzo, M.A., & DiLorenzo, T. (1993). Determinants of exercise in children. *Preventative Medicine*, 22, 880-889

Super, C. (1976). Environmental effects on motor development: The case of African precocity. *Developmental Medicine and Child Neurology*, 18, 561-567.

Thelen, E. (1995). Motor development-a new synthesis. *American Psychologist*, 5079-95.

Thelen, E., & Ulrich, B. (1991) Hidden skills. *Monographs of the Society for Research in Child Development,* 56.

Toth, J., & Xu, X. (1999). Ethnic and cultural diversity in father's involvement. *Youth and Society,* 31, 76-99.

U.S. Census Bureau (2000). High school students engaged in organized physical activity. 1999. *Statistical Abstract of the United States*: 2000(120th ed). Washington D.C.

U.S. Department of Health and Human Services. (1996*).* Physical activity and health: a report of the surgeon general. In President's Council of Physical Fitness and Sports Research Digest (2002) Series 3 (9).

Vega, W.A. (1990). Hispanic families in the 1980's: A decade of research. *Journal of Marriage and the Family,* 52, 1015-1024.

Younnis, J., & Smollar. (1985). *Adolescents relations with mothers, fathers, and friends.* Chicago, University of Chicago Press.

Zuniga, M.E. (1992).Families with Latino roots. In E.W. Lynch and M.J. Hanson (Eds.), *Developing cross-cultural competence: A guide for working with young children and their families (pp. 151-179).* Baltimore, MD: Paul H. Brookes.

MICHIGAN STATE UNIVERSITY LIBRARIES
3 1293 02845 4084